



**AMERICAN BUILDER  
and  
BUILDING AGE**

IS THE BUSINESS  
JOURNAL OF THE  
ACTIVE MEN OF THE  
BUILDING INDUSTRY

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# AMERICAN BUILDER AND BUILDING AGE

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# A New...more attractive J-M

## APPLICATION COSTS



Where sheets butt together, a simple application of filler compound makes joints practically invisible.

With an ordinary breast drill, carpenter can quickly prepare J-M Asbestos Wainscoting for nailing.

Nine nails are all that are needed to hold each sheet firmly and permanently in place.

## COLORFUL, SANITARY "TILE" WALLS THAT

*Now, with these radically reduced prices, any home—new or old—can have modern tile walls*



Each sheet of J-M Asbestos Wainscoting, 32" x 48", covers 10 1/2 sq. ft. area. Sheets may be sawed or scribed to fit.

**TODAY** one of your greatest problems is to keep the cost of the homes you build within the limits of your customer's budget. He demands "the world with a fence around it"—but he wants it at half the price. He wants the colorful tiled bathrooms and kitchens he sees in the more expensive homes—and with J-M Asbestos Wainscoting you can give them to him at a cost that he can afford.

J-M Asbestos Wainscoting is a new

permanent wall material in tile design and in sheet form that can be applied by any carpenter using ordinary carpenter's tools.

*For remodeling and new construction*

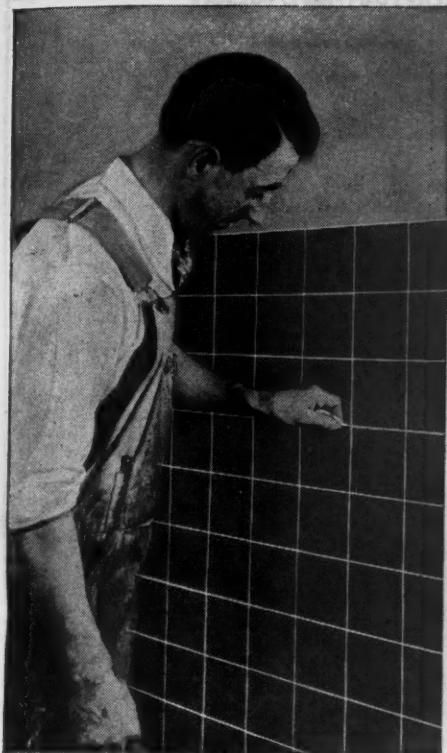
Kitchens, bathrooms, breakfast nooks, store interiors, restaurants—all these represent a ready market for the sale of J-M Asbestos Wainscoting.

Its simplicity of application makes it particularly suited for remodeling and modernization work over existing wall surfaces.

J-M Asbestos Wainscoting is made of Asbestos and Portland cement with colorful, wear-resisting surface that will stand up under the most

# Asbestos Wainscoting . . . .

**REDUCED 25% . . .**



Countersunk nail heads are made invisible simply by cementing over with special filler compound.

Cap and base — either of wood or asbestos — are nailed in place. As easily applied as the sheets.

The finished job. An old bathroom — transformed and modernized with walls of J-M Asbestos Wainscoting.

## YOUR CARPENTERS CAN APPLY

trying household conditions. Its surface will never crack or craze, nor are there any units to loosen or fall out. A new material, which, because of its economy, beauty, durability, permanence, simplicity and ease of installation, opens up opportunities for new uses and wide applications for a wall finish of this type.

of asbestos or of wood are available in all the colors of the wainscoting and in black, offering a wide choice of trim.

If you have not seen samples of this new, improved J-M Asbestos Wainscoting, ask a J-M salesman to call, or drop us a line. The coupon makes it easy.

J-M Asbestos Wainscoting is available in a wide range of attractive popular colors — light green, light blue, ivory, white and mottled green and mottled blue — the two latter a distinctive development of Johns-Manville. J-M Wainscoting sheets may be had in tile design or smooth finish. The base and cap mouldings

**Johns-Manville**  
JM  
**ASBESTOS  
WAINSCOTING**



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Please send me full details of J-M Asbestos Wainscoting.

Name ..... *FOR MAIL USE ONLY*

Address ..... *FOR MAIL USE ONLY*

City ..... State ..... *FOR MAIL USE ONLY*



Type of houses in the  
Auburndale development,  
Flushing, N.Y.

MAIN OFFICE  
320 Broadway Avenue  
HOBOKEN, N.J.  
Telephone: HOBOKEN 5-2110

RODMAN & ENGLISH  
*RODMAN & ENGLISH*  
Our Shield is Your Protection

AUBURNDALE PARK  
DEVELOPMENT  
2000 Flushing Avenue  
Telephone: FLUSHING 2-2146

March 29th, 1932.

The Standard Textile Products Company,  
320 Broadway  
New York City.

Gentlemen:

We have used Sanitas Washable Cloth Wall Covering, style T-4926, in kitchens in our Auburndale development and we are very well pleased with the fine effect obtained. The idea of using a strong cloth back material appeals to us and to the buyer of our houses as well, as Sanitas not only protects and reinforces the wall but will serve as a foundation for painting in years to come.

We are always glad to endorse a material that has given us satisfaction and recommend its use to others in the industry.

Yours very truly,

RODMAN & ENGLISH BLDG. CORP.

BY *George E. English*  
President

CCS:VHS

Each purchaser of one of our houses promises our company for one year against merchandise and material.

## Rodman & English Endorse Sanitas

Several of the most attractive building developments on Long Island have been sponsored by Rodman & English.

Their project at Auburndale Park, Flushing, New York, embraces one hundred homes of the type illustrated above. Standard quality, nationally known materials are featured.

All the kitchens in this development are decorated with Sanitas. Mr. English writes, "The idea of using a strong cloth back material appeals to us and the buyer of our houses as well."

Sanitas comes in styles for every room. Can be cleaned like wood-work. Can't crack or fade.

Samples and literature on request

THE STANDARD TEXTILE PRODUCTS CO.  
320 Broadway      Dept. 52      New York



Typical kitchen in Rodman-English house. One hundred of them decorated with Sanitas.



# Here's a carpenter's own wallboard!

All wood—not plaster or pasteboard—made up in three plies to prevent splitting, shrinking, and swelling!



**A**T LAST—carpenters can use *real lumber* for walls and ceilings! No more dust and grit, no more buckling, denting or scuffing. Douglas Fir Plywood gives you *genuine lumber*—split-proof and warp-resistant—in sizes up to 4 feet by 8 feet, ready to nail over old plaster or directly to studding.

Douglas Fir Plywood Wallboard is 1/4" thick, saws easily in any direction, holds nails firmly, and can be bought at retail for around 4 to 7 cents a square foot, depending upon quantity and the dealer's freight cost.

Other thicknesses of Douglas Fir Plywood—3/8", 1/2", 3/4"—are ideal for all kinds of cabinetwork, cupboards, file cases, tables, built-ins, etc. Builders like its easy handling and economy.

Douglas Fir Plywood is carried in stock by most progressive building supply dealers. Send today for sample and new plans for profitable jobs. The coupon brings them, free.



## \$5,000 for IDEAS

**N**OT a contest, but a purchase offer for practical designs using Douglas Fir Plywood. Entries must be postmarked not later than August 15, 1932.

*Here's what we want:*

**1** A sketch, or plan, for as many Douglas Fir Plywood uses as you care to submit. We will buy as many as we can use.

**2** You need not make a finished working drawing. Clear "idea sketches" are enough, just so they indicate dimensions and show how your design is to be constructed.

**3** You are not limited in the uses you may suggest. For example, you may design Douglas Fir Plywood wall-treatments for a whole room—such as an attic bedroom, recreation room, dining room, kitchen, etc.—or you may design entrance ways, hallways, and stairways—or fixtures and built-ins such as wardrobes, breakfast nooks, bookcases, radio cabinets, store displays, etc.

**4** For every usable sketch employing Douglas Fir Plywood we will pay \$25.00 cash, otherwise returning your sketches if return-postage accompanies them. If, besides your sketch, or plan, you care to send us a photograph of your design as built, we will pay you \$5.00 extra—or a total of \$30.00 for each accepted "idea sketch." Each sketch purchased becomes the property of Douglas Fir Plywood Manufacturers with right to use it for advertising, publicity, or in any other way.



Vertical paneling is a simple job with Douglas Fir Plywood Wallboard. The large panels are nailed in place and bottoms put on in any spacing desired.

Douglas Fir Plywood can be used in many ways. Note the interesting built-ins with plywood shelves and lining. The walls and ceilings are of Douglas Fir Plywood Wallboard.

# DOUGLAS FIR PLYWOOD



DOUGLAS FIR PLYWOOD MFRS., Dept. 532-B,  
Sixth Floor, Skinner Bldg., Seattle, Wash.

Gentlemen: Please send me free working plans, helpful literature, and sample of Douglas Fir Plywood.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Check here if you are a Contractor  Carpenter , Building Supply Retailer  Architect  , or Realtor  , and additional material will be sent you.

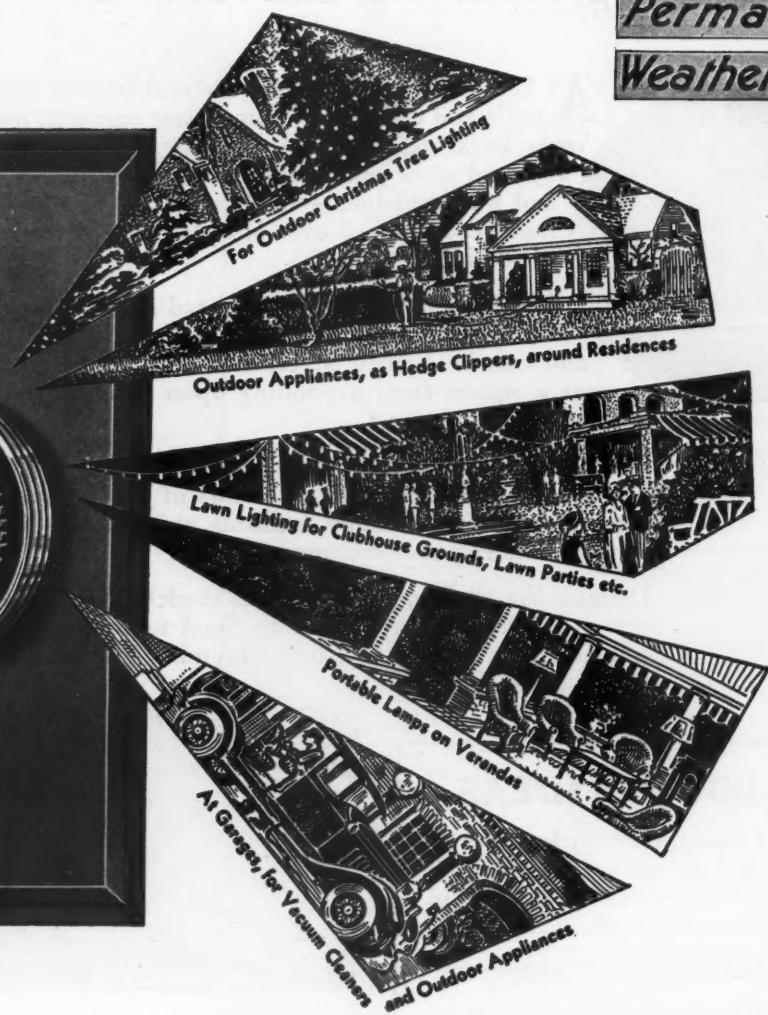
# Arrow *New* OUTDOOR Flush Receptacle

No. 7792



No. 7793

**Permanent  
Weatherproof**



PROVIDES a permanent Convenience Outlet for plugging-in outdoor lighting connections or appliances. Saves owners the nuisance of temporary wiring from the inside. Sturdily designed to weather the action of rain, snow, ice and continuing dampness. . . The finish—cadmium on brass—defies rust and corrosion. When not in use, a metal cap screws over receptacle opening for protection from weather. When connected, the standard attachment plug cap is covered with separate metal cap (No. 7793) which screws onto flush plate. A rubber mat fitting under the plate completes the weatherproofing. For Christmas lighting of evergreen trees, for decorative lighting of lawns, for porch lamps and electric appliances used outdoors, specify No. 7792 for convenience with permanence.

\* \* \* \* \*

**THE ARROW-HART & HEGEMAN ELECTRIC CO.**  
**HARTFORD, CONNECTICUT, U.S.A.**

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



# Micarta Walls —for the modern bath . . .

A review of recent bathroom designs indicates a trend towards walls with large unbroken areas, with or without decoration.

Micarta is an ideal material for such walls. Panels of Micarta are not affected by moisture, even by the drenching of a shower. They are easy to clean, too. Wiping with a soapy cloth will restore the original gloss.

A wide variety of flat colors and patterns permits ample flexibility of color scheme. Attractive designs can be effected with a combination of harmonizing colors. The decorative possibilities of Micarta are almost unlimited—even special inlaid patterns can be supplied.

Let us tell you more about Micarta—the new material for interior decoration. Mail the coupon.

**Westinghouse**  
T 79120  
*Quality workmanship guarantees every Westinghouse product*

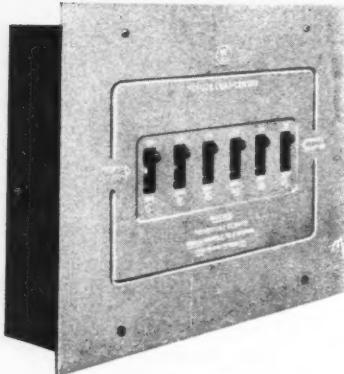


#### SEND FOR INFORMATION

Westinghouse Electric & Manufacturing Company  
Room 2-N—East Pittsburgh, Pa.

Please tell me more about Micarta—the new material for interior decoration.

Name  Company   
Address  City  State



## *The NOFUZE Load Center*

This box, set into the kitchen wall or other convenient spot, contains several small circuit breakers or Flipons, each guarding one of the electrical circuits of the home against overloads. We will be glad to send full details to any builder interested in adding another selling feature to his homes. Simply mail the coupon.

**"See — this is  
a FUSELESS home"**

HERE'S a new convenience that will interest home buyers—*Fuseless wiring protection*.

The old-fashioned fuse box down under the cellar stairs is a thing of the past. Its job is taken by the modern Westinghouse NOFUZE Load Center, conveniently located in kitchen or hallway.

When the lights go out, or perhaps when an overloaded washing machine opens the circuit, the mere flip of a handle restores service immediately. There is no hunting in the dark to locate the blown fuse. No phone calls for the service man.

Home buyers will welcome the convenience of this modern method of wiring protection.

**SEND FOR BOOKLET**

Westinghouse Electric & Manufacturing Company  
Room 2-N—East Pittsburgh, Pa.

Gentlemen: Please send me a copy of Circular 1913.

Name \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

ABBA 5-1

**Westinghouse**  
T 79144  
Quality workmanship guarantees every Westinghouse product





## THIS ADVERTISING *works For you . . .*

**L**IBBEY · OWENS · FORD national advertising has created in the home buying market a keen appreciation of fine glass upon which many builders are capitalizing successfully and profitably. They find that in the buyer's mind there is a very definite realization of just how much quality means in enhancing the charm of a home. They also find that the unusual and lasting brilliance which the exclusive flat drawing process gives to

Libbey · Owens · Ford Quality Glass makes an immediate impression upon the prospect that helps to hasten the sale.

You, too, can employ this same sales advantage by specifying Libbey · Owens · Ford "A" Quality Glass in the homes you build to sell. For your protection — and for that of the buyer who is seeking the highest quality—the distinctive L · O · F label identifies each sheet.



# LIBBEY · OWENS · FORD QUALITY GLASS



LIBBEY · OWENS · FORD GLASS COMPANY, TOLEDO, OHIO  
Manufacturers of Highest Quality Flat Drawn Window Glass,  
Polished Plate Glass and Safety Glass; also distributors of  
Figured and Wire Glass manufactured by the Blue Ridge Glass  
Corporation of Kingsport, Tenn.

# MODERN kitchens

*are selling houses... equip yours with*

## MONEL METAL SINKS



Above—Double drain board Monel Metal kitchen sink. Made in nominal sizes of 72" x 21" and 60" x 21". Monel Metal Sinks are also available in right- and left-hand single drain board and right- and left-hand corner splasher models. Your choice of 10 models and 6 sizes.



Monel Metal is a registered trade mark applied to a technically controlled nickel-copper alloy of high nickel content. Monel Metal is mined, smelted, refined, rolled, and marketed solely by International Nickel.



## MONEL METAL

THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL STREET, NEW YORK, N. Y.

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

# Keep out of the RED with MAGIC CHEF



INSTALLING the right equipment in your properties will go a long way toward making them more desirable and profitable. Because Magic Chef is the gas range of a woman's dreams, its installation may prove the deciding factor in favor of your properties.

- Magic Chef is right because it represents the most advanced

cooking appliance in the market today. It has a choice of models and a price range to meet every building requirement.

- Because Magic Chef is extensively advertised nationally, and universally accepted as the gas range of today, you can't go wrong on its selection.
- Magic Chef will do its part to keep you "out of the red."

## AMERICAN STOVE COMPANY

*World's Largest Manufacturer of Gas Ranges*

NEW YORK • PHILADELPHIA • ATLANTA • CLEVELAND  
CHICAGO • ST. LOUIS • SAN FRANCISCO • LOS ANGELES



Look for the RED WHEEL  
When you buy a MAGIC CHEF

(Look for this Trade Mark)



It takes only a little *Pull* to operate  
 Stanley  
 "Swing - Up"  
 Equipment  
 and  
 only a little  
*Push*  
 to sell it



Advantages of Stanley "Swing - Up" Equipment

No hardware visible or exposed to weather.  
 Doors perfectly balanced — they "float" into position.  
 Only equipment of its kind which locks in the open position — no possibility of accidental closing.  
 Requires no headroom above top of door.  
 Absolutely weather-tight.

Garage doors equipped with the new Stanley "Swing-Up" Hardware Equipment "float" into position, either open or closed. Don't let an opportunity pass to suggest "Swing-Up" Equipment for new construction or for modernization of old. It's absolutely weather-tight, fits old doors as well as new, and takes as little time to install as ordinary hardware—often less time.

• Features of Stanley "Swing-Up" Equipment •

Sturdy hardware equipment built to take care of light, medium and heavy doors. Fits doors from 8' to 9' in width, 7' to 8' in height and 1 $\frac{1}{8}$ " to 1 $\frac{3}{4}$ " in thickness. Other sizes made to order.

There is no danger of doors hitting the top of a car in the garage . . . Doors may be left in any position.

Equipment includes two bridge truss braces to fasten two doors together firmly. A long strip is furnished to cover opening where two doors join in the center. This, together with heavy

metal plates which serve as stops as well as weather strips, make the "Swing-Up" equipped door absolutely weatherproof.

Ball bearing pulleys. Roller bearings on axle on which door swings.

Doors can be locked with ordinary night latch and either keyed alike or master keyed with the house door.

Stanley "Swing-Up" Equipment is sold ONLY through your local dealer. See your regular source of supply for good hardware.

*Full description of Stanley "Swing-Up" Equipment will be sent upon request*

THE STANLEY WORKS :: NEW BRITAIN, CONN.



**STANLEY GARAGE HARDWARE**  
 FOR EVERY TYPE OF DOOR



# Pennvernon Windows

## MIRROR NATURE in its TRUE COLORS



HALF the charm of a room consists in the views which can be seen from its windows. But if these views are to be charming, they must be brought into the home clearly, in fine detail, in all their natural colors.

Pennvernon Window Glass will transmit the beauties of Nature in just that way. None of Nature's own bright coloring is lost, or changed, or dimmed—because Pennvernon is so free from color itself that it mirrors Nature's hues as they really are.

Furthermore, Pennvernon has an unusual flatness and transparency that gives it a life-like clearness of vision. Imperfections and distortions are conspicuously absent in this fine glass.

Pennvernon assures greater interior beauty—and greater exterior beauty, too. The special manufacturing process by which this glass is made gives it a new brilliance of surface finish on both sides of the sheet and consequent reflective qualities unequaled by those of any other glass. In addition, Pennvernon's lustrous surfaces are extraordinarily smooth and dense in structure so that wear and abrasion affect them less. Longer lasting window beauty is the result.

Stock this popular, fast-selling window glass and collect your share of Pennvernon profits. It is available in single or double strength, and in thicknesses of  $\frac{1}{16}$ " and  $\frac{1}{8}$ ", at the warehouses of the Pittsburgh Plate Glass Company in principal cities, and through progressive glass jobbers. Write to us for samples and for our booklet on the manufacture of Pennvernon. Pittsburgh Plate Glass Company, Grant Building, Pittsburgh, Pa.



# "This New Shingle Gets the Business"

"Yes, since I took on Carey Duplex Asbestos Shingles, both new work and reroofing business have come my way." That's the story of builders and dealers who are handling



## Carey Duplex Asbestos Shingles



Preferred by architects and owners because of the exclusive Carey "Weather-Age" surface (which has much the appearance of costly hand-hewn slate), these remarkable new shingles combine lasting beauty and fire-proof protection. They are produced in five attractive colors—red, brown, green, black and gray.

Possessing all these advantages, Carey Duplex Asbestos Shingles nevertheless enable you to meet competitive prices and still make a satisfactory profit, because the double unit and the self-aligning notch cut application costs. We have developed a plan which is securing profitable business on Carey Duplex Asbestos Shingles for dealers and builders in every part of the country; we will gladly send full information on request.

**THE PHILIP CAREY COMPANY • Lockland, Cincinnati, Ohio**

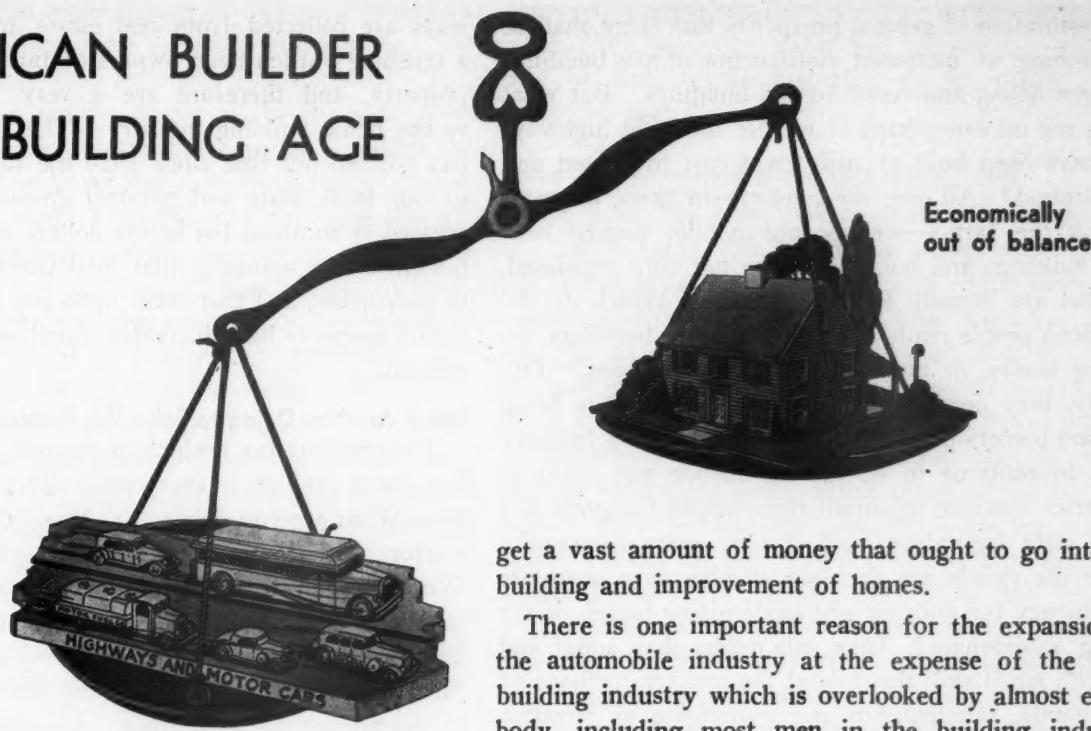
Branches in Principal Cities

BUILT-UP ROOFS  
ASPHALT PRODUCTS  
ELASTITE EXPANSION JOINT  
WATERPROOFINGS  
ROOF PAINTS

**Carey**  
PRODUCTS

HEAT INSULATIONS  
ASBESTOS MATERIALS  
CORRUGATED ASBESTOS SIDING  
ASFALTSLATE SHINGLES  
ROLL ROOFINGS

# AMERICAN BUILDER AND BUILDING AGE



## AUTOMOBILES AND HIGHWAYS— OR HOMES?

**The Automobile Industry  
Sets a Good Example**

THE building industry and the automobile industry are two of the largest industries in the United States. One day we read in the newspapers that the restoration of prosperity must be started by a revival of home building. The next day we read that it must be started by a revival of automobile buying. The people at this or any other time have only a certain amount of money they can spend. The automobile industry for some years has been the principal competitor of the home building industry for their money. Every manufacturer in the automobile field is a competitor of every manufacturer in the building field, excepting those who do business in both fields. Every manufacturer or salesman of automobiles is a competitor of every contractor or material dealer in the building field.

The building industry can learn a great deal about selling from the automobile industry, which for years has been beating the home building industry in the competition for the people's money. The automobile industry, through its advertising and salesmen, has succeeded in making a vast majority of families believe that the kind of automobiles they have is far more important than the kind of homes they have. The automobile industry is now making another great drive for business. The home building industry is not as well organized, and if it does not awaken, the automobile industry will again

get a vast amount of money that ought to go into the building and improvement of homes.

There is one important reason for the expansion of the automobile industry at the expense of the home building industry which is overlooked by almost everybody, including most men in the building industry. This is, that the automobile industry is indirectly subsidized by government at the expense of the taxpaying public, and that a large part of the taxes with which it is subsidized is collected from real estate. Excessive taxation of real estate hinders home building. Therefore, the present policy of taxation injures the home building industry in two ways. It reduces the attractiveness of home building and home owning by excessive taxation of real estate, and it makes automobile owning more attractive by subsidizing it with taxes collected upon real estate.

### An Example from the Automobile Industry

Save for the matter of taxation for highway purposes, the building industry has no legitimate quarrel with the automobile industry. It is not only to the interest of the automobile industry, but is its unquestionable right, to use every available means—improvement of its models, reduction of its production costs and prices and every form of salesmanship and advertising—to enlarge its sales. In doing all these things at the present time it is setting the best kind of an example to the building industry and every other industry in this country. The continuance of the depression is due less to the people's lack of purchasing power than to their disinclination to use it. Once get more purchasing started and there will immediately begin an increase of employment and of general purchasing power. The use of this increased purchasing power will further increase employment, and continuance of this process finally will completely restore prosperity.

But prosperity can be restored only by restoring purchases, employment and activity in virtually all lines of business. The building industry is one of the very largest, and therefore it is one of the principal essentials

to a restoration of general prosperity that there shall be a beginning of increased construction of new buildings and remodeling and repair of old buildings. But what do we see on every hand if we use the good highways that have been built at such great cost to go out and look around? All over the country—in cities, in towns and on the farms—we see automobiles parked near store buildings and houses that are not only unpainted, but that are literally falling to pieces. Which do the American people really need more—better buildings, including homes, or more and better automobiles? Obviously, they need better buildings more. This being true, are owners of real estate and the building industry going to continue to let the automobile and highway industries continue to outsell them before Congress and every state legislature, and also in every community where the people are deciding whether they shall use their money for building and modernizing homes or for buying automobiles? They will unless they adopt and use with equal skill throughout the country methods of propaganda, salesmanship and advertising as effective as those that are being used by the automobile industry.

#### A Time to Say Unpopular Things

The present depression in the home building industry has now lasted four years. The depression in general business has lasted three and one-half years. It has been the most profound depression in history, as well as one of the longest. Its causes and remedies have been much discussed. The principal reasons why effective remedies have not been found and applied have been the selfishness and cowardice of politicians and business men. Politicians have feared to say and do what they believed right lest they would lose votes. Many business men have said and done what they knew to be contrary to the general economic welfare to promote their own selfish interests, or failed to say and do what they believed would promote the general economic welfare lest saying or doing it would hurt their own business. The AMERICAN BUILDER AND BUILDING AGE believes experience has demonstrated that the time has come when newspapers, magazines, public men and business men must, regardless of the possible immediate effects to themselves, say and do unpopular things in order to improve general business.

The automobile has become the fetish of the American people. To criticize the expenses it causes has become almost as dangerous as to question the truth of the Christian religion. This paper has become convinced, however, that two of the principal causes of the present depression, and of its depth and duration, have been the spending of too much money on automobiles as compared with other things and the squandering of money by public officials in the conduct of the local, state and national governments. A large part of the increased expenditures of our governments have been for the construction and maintenance of highways. A large part of the taxes spent and still being spent upon high-

ways are collected from real estate and have become a crushing burden upon owners of farm and residential property, and therefore are a very heavy handicap to the home building industry. This paper repeatedly has pointed out that since 1924 the total expenditures of our local, state and national governments have increased from about ten billion dollars to about fourteen billion dollars annually, that total taxes have increased in proportion, and that taxes upon real estate and other visible property have increased much more than in proportion.

#### What Are You Doing to Solve this Problem?

The resulting tax problem is not only a national problem, but a problem in every state, city, county and township. What are you doing, Mr. Manufacturer, Mr. Contractor, Mr. Material Dealer, Mr. Building Trades Working Man, to force your senators and congressmen in Washington, your state officials, your city, county and township officials, to reduce every kind of expenditure that is causing this crushing burden of taxation? If you are not doing anything, why should you complain about the depression and unemployment? Most of your public officials are doing nothing but trying to find new sources from which to extort taxes. If you don't force them to reduce every kind of government expenditure they will simply make changes, not reductions, in taxation, and your tax burden, direct and indirect, will not become lighter but heavier.

But what about the automobile? Alvin Macauley, president of the National Automobile Chamber of Commerce, said recently: "Although the wheels of commerce and industry have not been revolving so rapidly during the last year, those rolling on rubber tires conquered more miles of highway in 1931 than ever before." He added that in 1931 automobile owners con-

#### "Things Are Getting Better"

From a statement made by General Charles G. Dawes, president of the Reconstruction Finance Corporation, before the Ways and Means committee of National House of Representatives at Washington, D. C., on April 21.

"Down here in the Reconstruction Finance Corporation we are in a position to know that things are getting better in this country—in a damn sight better position to know what is going on than are those fellows in that security peanut stand in Wall street.

"Bank failures are falling off. The banks are beginning to make loans again. It makes no difference what Wall street thinks down there where that peanut gambling is going on.

"You can take it from me we are approaching prosperity. The mass attitude of the people has changed from pessimism to optimism, but, of course, it will take time to realize the full results. Business is a ponderous machine and takes time to get in motion."

sumed 500,000,000 more gallons of motor fuel and ran their cars eight billion more miles, or an average of 300 more miles per car, than in 1930. He continued: "Behind these figures are the stories of thousands of families who were willing to sacrifice luxuries and even so-called necessities in order that they might not be denied the use of their cars." That they did not make this increased use of their automobiles for business purposes is demonstrated by the fact that the total volume of business done last year was the smallest for twelve years. And who failed to sell the luxuries and necessities they sacrificed in order to pay for joy-riding eight billion more miles than in 1930? Every manufacturer, every builder, every wholesale merchant, every retail merchant, every working man in this country who does not derive his business or wages directly or indirectly from the automobile and highway building industries.

#### Where the National Income Goes

There are 26 million motor vehicles in the United States, and if they traveled an average of 7,000 miles at an average cost of 4 $\frac{3}{4}$  cents per mile the cost of operating them was almost \$8,700,000,000. Therefore, the combined costs of operating motor vehicles, and of maintaining all our governments was about \$23,000,000,000. The total income of the American people last year is estimated at \$52,000,000,000. Thus it would appear that in 1931 they actually paid more than 40 per cent of their total income for supporting their governments and operating their automobiles. Is it any wonder, in view of such figures, that business in most lines continues bad? It is not bad in all lines, however. Manufacturers of tobacco, chewing gum and a certain soft drink that is sold at all drug stores report that they made the largest earnings last year in history! Like the automobile industry, they are all good advertisers and salesmen.

What has this to do with the building industry? Included in the huge government expenditures mentioned was an expenditure of about \$1,500,000,000 upon highways, which brought total direct and indirect expenditures due to motor transportation up to more than ten billion dollars. Of that expenditure upon highways, less than one-half was derived from license fees, gasoline and other motor vehicle taxes, and more than one-half from taxes upon general property, especially real estate. The two principal causes of the total increase in government expenses within the last decade have been expenditures for education and upon highways, and right now spokesmen of the automobile and road building industries are opposing increases in taxes upon gasoline and automobiles while advocating increased expenditures upon highways. In a statement issued on March 30, W. R. Smith, president of the American Road Builders' Association, said: "It has been suggested that our road systems are rapidly reaching completion. On the contrary, the task of building the highways of the United States hardly is begun." The total

expenditure upon rural roads—those outside the cities—since 1920 has been about \$13,500,000,000, but "the task of building the highways of the United States hardly is begun!"

#### More Highways—and More Real Estate Taxes

In arguing for increased expenditures upon highways, Mr. Smith said: "Such highway improvement reduces the operating costs of motor vehicles to the extent that the annual saving due to surfaced roads more than equals the cost of maintaining the highways and the capital invested in new, improved roads built outside of cities." Why, then, should the automobile and highway interests be powerfully propagandizing and lobbying against increased automobile and gasoline taxes to pay for highways? Some persons own both real estate and automobiles. Others do not own real estate, but own automobiles. If it is true, as Mr. Smith says, that "highway improvement reduces the operating cost of motor vehicles" so much, why should not all the taxes for highway construction and maintenance be collected from the owners and users of motor vehicles? Why should real estate be taxed at all for highway purposes? Why, especially, should real estate continue to be required to pay a large part of the cost of providing and maintaining highways for those who operate heavy motor buses and trucks for their own commercial profit?

Are farmers, home owners and other owners of real estate and the building industry going to permit real estate to continue to be taxed to subsidize transportation by highway, when the direct effect is to destroy the value of real estate and tear down the building industry?

#### How Revive Prosperity?

But, it may be said, a revival of automobile buying and highway building will revive prosperity. Prosperity for whom? Would not a revival of home and other building construction help to revive prosperity? It would help a great deal more to revive it than an increase in expenditures upon automobiles and upon highways, which, as taxes are now levied and as it is proposed to levy them in future, would impose a burden upon real estate that would be extremely inimical to its owners and to the building industry.

This is plain talk. It may be unpopular talk. But it is sense, and it is sound economics, and sound business. Before you disagree with it, Mr. Manufacturer, Mr. Contractor, Mr. Material Dealer and Mr. Building Trades Working Man, think it over and see if you don't finally conclude that it is sound. Every one of you is in direct competition with the automobile and highway building industries for the money of the American people, and it is certain that if they get too much of it, as they have in the past, you are not going to get enough of it.

If you decide we are right, then in your own self-interest get out and fight throughout the country and in

every community for drastic reductions of all government expenditures as well as for reductions of taxes upon real estate. Get out, meet the automobile competition and sell people home building and modernizing. The American people cannot continue to spend almost half their income for joy riding and for providing tax-eaters with jobs, and restore general prosperity, because good business for everybody, including the great building industry, is essential to a restoration of general prosperity.

## MORE ACTION NEEDED ON HOME LOAN BANK BILL

**A**LTHOUGH the bill providing for the establishment of Federal Home Loan Banks is making progress, it is not being pushed with the vigor and certainty that the gravity of present construction financing conditions warrant.

This bill is the only one of the major relief measures submitted to Congress three months ago that has not yet come to vote. Large scale industry, banking, commerce and agriculture have been given assistance. People who are entirely down and out are taken care of by the nation's charity. Only the home owner has been neglected. We think it time that action be taken on his behalf by immediate passage of this bill.

The Federal Home Loan Bank Bill has four major objectives. These may be listed as follows:

1. Prevent a disastrous blow to home ownership in the present emergency by preventing increased foreclosures.
2. Help to break the economic deadlock, revive business and employment.
3. Protect and increase home ownership in the future by giving liquidity to mortgages.
4. Give the same protection and insurance to \$15,000,000,000 worth of home financing that is now given to all commercial, industrial and agricultural financing.

Thousands of home owners are confronted this spring with the certainty of losing their life savings as represented in the homes they occupy. More foreclosures mean still greater demoralization of an already bad realty market. There is no reason why this must go on. Passage of the Home Loan Bank Bill would pave the way for relief in the near future.

Of still greater interest to the building industry is the permanent good a system of Federal Home Loan Mortgage Banks would do. It would put home ownership and home financing on a stable, desirable basis.

Hardly anyone doubts the often repeated statement that the home owner and taxpayer is the backbone of the nation's credit and the force that gives security to our institutions. Yet this worthy individual is kept at the mercy of the most ruthless market in the world—the money market. It is more difficult and more expensive to finance the purchase of a home than it is to finance a business, an industry, an automobile or almost

anything else. Even in good times there is not enough mortgage money to meet the needs of the country. The home loan bank, by giving liquidity to mortgages, would correct this situation and would, at the same time, strengthen and protect all such investments.

We have reviewed before the many advantages that recommend this bill to the building industry and to the nation at large. We strongly urge every active man in the building industry to do everything in his power to secure its prompt passage.

## COMMUNITY DRIVES IMPORTANT

**T**HE importance of community drives to stimulate modernizing and home improvements, and thereby relieve unemployment, looms larger with every passing day. They are the most encouraging development in the construction industry this year, and contractors and building supply dealers would be extremely foolish not to take advantage of the opportunities they offer.

The magnitude of the movement is indicated by the fact that if only 200 of the 600 cities reported to be beginning or considering such drives produced only average results it would still result in 30 million dollars worth of work.

Modernizing is a subject that builders have heard so much about that some can hardly be blamed for calling it "old stuff." But with the community unemployment drives behind it, modernizing now taking on an important, worth-while aspect. Perhaps, it would be better to use the new phrase "renovising" which at least has the advantage of being different.

## BETTER HOMES FOR 1932

**C**ONTRACTORS, architects and building supply men are today in a better position to provide good small homes for people of moderate income than they ever have been before.

The 1932 model homes, while not as widely ballyhooed as the new models of automobiles or radios, are equally advanced over styles of earlier years. They are as much the product of modern science and skill as these more widely advertised luxuries.

While business has been slack, architects and builders have been improving and perfecting home designs. They have learned new ways to conserve space, provide comfort and beauty, and build for permanence. In the face of keen competition builders have developed more efficient construction methods that reduce costs. The small homes of 1932 will have more built-in livability than houses twice their size of a few years ago.

Even greater advances have been made in the field of building materials and modern home equipment. Dozens of new products have been developed in the past year which are awaiting only the return of normal building activities to spring into national prominence. While the factories have been operating at part time, the research engineers have been working overtime.



## More Modernizing Better Selling . . .

Two matters that need the special attention of builders this spring

LOOK about you, builders. There is business in every block. Houses are rotting on their foundations, porches are sagging, paint peeling off, decay doing its worst.

Is there business to be had this spring? Take another look about you. Start on your own street. Count the houses that need new roofs, new trim, new siding, repairs.

Is this business worth going after? It runs into the millions in many communities. In February it made up 24 per cent of the total building work done in the United States. It will probably form the largest item in construction volume in 1932.

While the building industry has stood still

wear and tear, depreciation, fire and decay have gone on apace. The modernizing market is getting bigger every day.

This is work that every builder, no matter how small his organization, can promote at once. As a building expert he is qualified to inspect the homes in his community and recommend improvements. It is his job to show how repairs now will save loss later.

Here, then, is a double barreled program American Builder and Building Age recommends to its readers—better selling, more modernizing. Especial emphasis is laid on these subjects in this issue. More will follow in the months ahead.—THE EDITORS

# SELLING through SERVICE

**B**ETTER selling and merchandising is a crying need of the building industry. This magazine has long been an advocate of aggressive salesmanship and has repeatedly emphasized how necessary it is in order that the construction industry may compete successfully with other industries.

But the time has come to investigate this talk of selling a little more closely. What kind of selling? What do we mean by selling? Contractors are practical men, and are inclined to associate the word "selling" and a certain type of glib tongued, high pressure salesman whom they are very certain they do not wish to emulate.

Aggressive selling is needed more than ever before in the building industry today but it must be a salesmanship grounded in the industry itself and one that is thoroughly suited to contractors and builders.

A form of salesmanship that is *founded on service* is the best type of selling. A short, short story may illustrate this point.

A radio dealer was having trouble, as many are these days, selling new sets. He had hired and fired innumerable high pressure salesmen who didn't get him anywhere.

Finally he called in his head service man, his best and oldest employee.

"Bill," he said, "let's you and me go out and make a lot of calls to see if we can't sell some sets. There must be some people who want radios."

Out they went, and the owner had poor luck. But Bill came back late in the afternoon cheerfully carrying an old table set.

"And where did you get that?" asked the dealer.

"Oh, this is Mrs. Jones' squawker that I am going to fix up."

"But that's no way to sell a new set, Bill," said the dealer. "What we want is sales."

"Well," replied Bill, "I couldn't get anyone to listen to me any other way so I went in and offered to inspect sets to see if their reception could be improved. Mrs. Jones' set was giving her trouble. I'm going to see what I can do for it. But while she is in here tomorrow afternoon, we'll let her listen to one of our new Super-Hets and I wouldn't be surprised if we could sell her one. At least, I've made a friend."

As a result of this contact, Mrs. Jones was sold a new set and the radio dealer discovered a new way to sell. He sold by giving service.

This method has been widely used by radio dealers and many others. Tires and accessories for automobiles are sold the same way. People go to service stations for service, and they get it—lots of good, free service. At the same time, however, they buy gasoline, tires and accessories.

Does service pay? Ask any filling station operator.

The building industry has perhaps been going about its salesmanship the wrong way. It might put selling on a service basis. Homes, like radios or anything else, wear out and require repairs, improvements and periodic inspection. Members of the building industry may find that a greater volume of both new and old building work can be sold on a service basis than any other way.



"If you fix that bad spot now  
it will save you money later on."

I believe that the builder is the man best qualified to handle the selling end of construction work. He is undoubtedly the man best qualified to perform inspection service. Often his work can be done in cooperation with his local lumber or material dealer. In many cases the dealer himself may be best qualified to do the selling. The following suggestions apply equally well to both.

The place to begin is the place nearest home. One builder who had been complaining about lack of work discovered, when he made a thorough inspection of every house in the block in which he lived, that there was enough work to keep him busy for several months.

Home owners have been notoriously lax in tending to their buildings in recent years. This means that as high as 85 per cent of the houses in most communities are in need of repairing or alterations. The question is, how can these potential needs be turned into actual business? The answer is, through home inspection service.

If a salesman tries to sell a home owner something, he may balk. But when a qualified building expert, a man who knows construction thoroughly and whose

## By Joseph B. Mason

carpenters, painters and other building trades men on a commission basis to help them make the contacts that lead to business. Others tie in with the local modernizing and unemployment drives. Some dealers are taking an aggressive part and are working through their contractors to carry out an inspection service. One of the best plans is that suggested by a prominent manufacturer who has prepared a carefully worked out program for dealers. Essentially, it can be used equally well by builders.

The following procedure is recommended:

**OBTAINING THE APPOINTMENT**—The establishment of a home service station or home inspection department is widely announced through newspaper advertising, posters, truck placards, etc. With this background, a list of prospects is made up. Houses needing repairs can be seen on every hand and a mailing list can be made up from various sources.

A letter is then sent describing the home inspection service, asking for an appointment and enclosing a return post card.

If the letter is not answered, the prospect is called on the telephone, or perhaps another letter sent. The object is to get an appointment which will assure the inspector a chance to see the house and talk with the owner.

**MAKING THE INSPECTION**—Inspection is made by a qualified expert, preferably the contractor himself, who knows every detail of home building. During the inspection he will suggest alterations, repairs, remodeling or improvements. Repairs needed at once will receive first attention, and if he is a good salesman, he will be able to point out how other modernizing improvements might be made that would greatly add to the comfort or convenience or beauty of the house.

**REPORTING THE INSPECTION**—The builder or dealer makes a careful study of the details discovered in the inspection and finally works up a thorough-going report which can be presented to the owner.

This report that a conscientious inspection has been made discloses the things needed to put the home in first class condition and makes recommendations for remodeling, altering, additions, improvements and repairs that should be undertaken.

It is emphasized that the entire work should be handled by one firm so that the home owner can be given a unit price on the entire job and not be forced to deal with half a dozen different people.

**CLOSING THE SALE**—With this carefully prepared report, the builder or dealer is in a position to call on the home owner again, quote prices and close the sale. When he presents the report, he has a chance to discuss many things about the home with the owner. He may discover that he has a prospect for a new house later on. The home owner can be shown how many are the advantages of doing the work while costs are low and while employment is needed. More important, however, are the practical improvements that will bring the owner economy, convenience and comfort.

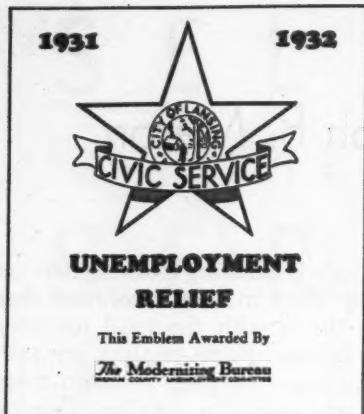
word can be trusted, points out that, unless he repairs that leaky roof or that bad spot under the front porch it will cost him a good deal of money before long, it puts matters in a different light.

When he offers to inspect a home free and give a thorough-going report on its condition, that is a service that the average home owner will appreciate.

The builder can not only recommend needed repairs but can show the owner how he can prevent loss of his investment value because of obsolescence. As a qualified building expert, he is fully able to recommend changes in keeping with the times that will prevent that house from being classed as out of date, and therefore not worth much.

How shall this home inspection idea be put to work in a practical way to create immediate building activity, which everyone admits is what we all want?

There are a number of plans in use. Some builders send out their own men or hire a corps of unemployed



Service Star Awarded Lansing, Mich.,  
Homeowners Who Modernize.

## Builders Active In Spring Modernizing Drives

Volume of business from new campaigns for repairing and "renovizing" homes increasing rapidly. Many more towns planning to stimulate improvements.

**T**HE national movement for reconditioning, remodeling and modernizing of homes is rapidly achieving a place of enormous significance to the building industry. Such towns as Wilmington, Del., Rochester, N. Y., and Muncie, Ind., served as the "laboratory" for trying out various plans. Now the best points are being picked up by hundreds of other communities and put to work to stimulate building and relieve unemployment.

In all this activity, contractors, building supply men and others interested in construction are playing an important part. In fact, as the letter on the opposite page testifies, it was a carpenter-contractor at Muncie, Ind.,

who took the good idea he got from AMERICAN BUILDER AND BUILDING AGE and started the Chamber of Commerce and local business men working on a modernizing campaign that has since made his town famous.

The Muncie Plan, like others, was not 100 per cent perfect and has been criticized in some quarters. The same may be said of other plans. The important fact, however, is that the hundreds of communities now starting or already engaged in active drives can avoid such mistakes.

Some idea of the magnitude of the movement may be gained from the fact that 37 cities completed drives prior to March 15; 89 are actively engaged in campaigns begun since January, and on April 1, 133 cities reported definite plans to start modernizing campaigns this spring. In addition, 642 cities have requested information and are considering drives. If only 200 of the total number of cities secure an average of only \$150,000 worth of additional work (and this is a low estimate on the basis of past results), an imposing total of \$30,000,000 of building business would result.

One of the weaknesses of the earlier plans, which is now being corrected, was the lack of direct transfer of pledges into real building work. It was easy to send canvassers out to get a big total of pledges to make a fine newspaper story, and then let the matter drop.

It is important, however, that a direct tie-up be made with building interests. Lists of loyal local contractors, architects, supply men and others who actively co-operate in the drive should be made up and persons making pledges should be helped to get in touch with the proper man who, when confronted with a live prospect, is able to get immediate results in building work.

Without neglecting this practical tie up, however, many towns have felt that better results are secured when building trades and interests are kept in the background. In Lansing, Mich., for example, the drive is conducted through the modernizing bureau of the Ingham County Unemployment Committee.

The strange fact must be faced that no real good can be achieved without

## YOU CAN HELP Put Hundreds of Men to Work Now!

Plan to Modernize Your Home — It Will Solve Ingham County's Unemployment Problem This Winter



Save Money and Weather  
Shipping Bills on Paint Strips

Thousands of houses and business properties in Lansing and Ingham county need modernizing. Hundreds of men in Lansing and Ingham county need work — They do not want charity — Owners of houses and business properties requiring modernization can put them men to work NOW by spending a few dollars on their properties.

Spending money on permanent improvements on properties NOW which prices are at the bottom, will revive and stabilize business generally. Do you know that the BUILDING TRADES employ twelve percent of our total labor?

Put the BUILDING TRADES back to work by starting that repair job NOW. Remodel old houses, put new paper on the walls and modern plumbing and electrical fixtures in it! Modernize it, make it more livable, then you will get desirable tenants who will pay you a reasonable return on your investments in rentals.



Make an Extra Income in The  
Aidle or Vacant

Winter is an obstacle to modernization. The majority of remodeling jobs can be done as well in Winter as in Spring or Summer. Don't put it off until Spring. The unemployment emergency is most desperate now.

WE YOU DO YOUR part! Of course you will! Loyal citizens of Lansing and Ingham county always have. Join the honor list of enterprising, loyal and helpful citizens whose names we will soon publish as willing to have their work done NOW.

A NEW HONOR ROLL IS IN THE MAKING  
JOIN IT BY SENDING IN THE COUPON



Stop Leaks — Insulate Hot Water Systems and Fixtures



Protect and Beautify Your Home  
In The Practical Way

**The Modernizing Bureau**  
INGHAM COUNTY UNEMPLOYMENT COMMITTEE



I Want to Help!	
Address	City
Phone	State
Check here if you are a business owner, contractor, architect, builder, etc.	
I am interested in modernizing. The job I have in mind is:	
Send me an honor list of those who believe in providing work to meet the modernizing emergency.	
Name	Address
City	State

**MAIL THIS COUPON**



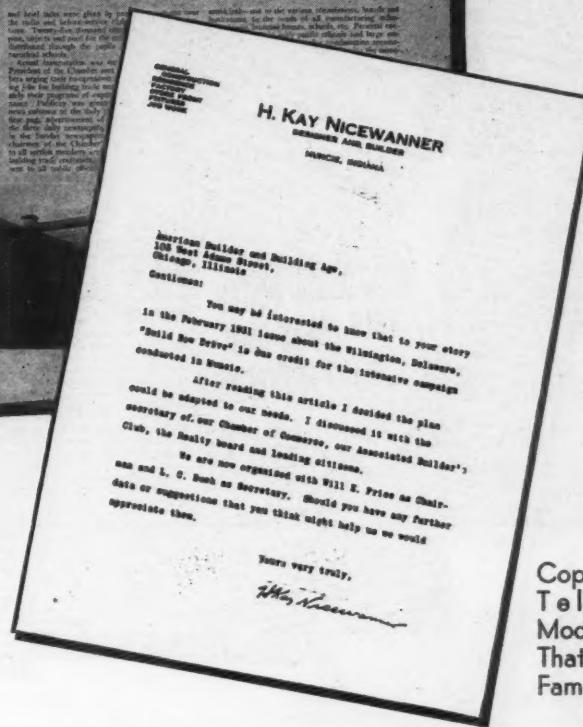
One of the Fine Full Page Advertisements Published in Lansing. Builders and Supply Dealers Report This Drive of Real Benefit to Them.

## HOW ONE BUILDER STARTED A BIG MOVEMENT



*Construction, Architects, Builders, and Building Supply Men Cooperate in Making Better Homes in Wilmington, Delaware. H. Kay Nicewanner, Muncie, Indiana, is Vice-President and General Manager of the Nicewanner Company, Inc., which has been instrumental in starting the "Build Now" campaign in Muncie.*

H. Kay Nicewanner,  
Muncie Builder,  
Read This Article in  
American Builder  
and Building Age  
and Was Prompted  
to Suggest the Fa-  
mous "Muncie Plan."



Copy of Letter  
Telling How  
Modernizing Plan  
That Made City  
Famous Had Its  
Origin.

**Is Business Dead in Your Town? Wake it up. Builders like Nicewanner are busy in hundreds of communities creating modernizing work. You can profit by their experience. Modernizing is the liveliest subject of the day, not only to builders, but to the public at large.**

some one, such as contractors and building supply men, getting business, while at the same time if the drive takes on the appearance of a selfish effort in benefit of one group alone, it quite naturally fails to get support from many people. It is better, therefore, to have it handled by some local organization, such as the Chamber of Commerce, Better Homes in America, the American Legion, the Woman's Club, or a committee on unemployment relief.

Further emphasis to the general modernizing and improvement activity is being given through "Clean Up and Paint Up" campaigns of which some 8,000 are reported to be in progress. This "war against depression" in its many forms cannot help but stimulate considerable activity for the building industry.

High lights of a few successful drives recently completed or now under way include some of the following:

**LANSING, MICH.**—An effective, well carried out plan in which the contractors and building supply men took an especially active part. On April 8, 302 jobs had been listed with the Modernizing Bureau with an average outlay of \$125.00 per job. Five-sixths of the jobs involved building repairs, and it meant sales for lumber and supply dealers and work for building men. Projects most frequently handled were: roofing additions, enclosing of porches for sun parlors, building of play rooms in basements and attics, repairs of porches and steps, re-stuccoing of buildings, weather-stripping,

new flooring, floor sanding, building of garages. The remainder of the work was mostly electrical, plumbing, plastering, painting, paper hanging and odd jobs.

Special features include the service star window card for home owners who did modernizing; cards to identify contractors working with the Bureau; placards for building supply and contractors' trucks; advertising modernizing efforts; wide distribution of 100 suggestions for repairing.

**DANVILLE, ILL.**—Another lively campaign backed by contractors and dealers and started with a big mass meeting, followed by thorough canvassing by 225 women. The contractor tie-up is especially good.

A list of builders and other workmen was compiled from the city directory and dealers were asked to check these over for deaths and removals, and to add new ones not already listed. This revised list is subdivided into the various building divisions, each of which gets work as the pledges come in. Contractors take their turn alphabetically in getting jobs and must report later whether they performed the work or whether they recommend sending some one else.

**BUFFALO, N. Y.**—A thorough job of "following through" is being done. On April 8, house to house canvasses by some 3,000 Legionnaires had secured pledges of more than \$2,000,000. The follow-up is now being rigorously performed by a force of paid workers

(Continued to page 72)



## Newspapers Discuss Building Problems

**N**EWSPAPERS and magazines of the country are showing a much greater interest in the present problems and future possibilities of the building industry than ever before.

Modernizing and repairs, the value of new homes, better building practices, importance of the industry in the economic stability of the country, are being increasingly brought home to the public.

AMERICAN BUILDER AND BUILDING AGE realized some years ago the need for an active editorial campaign to correct the many untrue and misleading statements frequently made about builders and the industry. Accordingly steps were taken to secure the cooperation of newspapers and magazines.

Problems of the industry taken up in its editorial pages are widely quoted and widely used, as shown by the clippings above. In addition, frequent newspaper articles are sent out to more than 2,000 newspapers in the United States, calling to the attention of the public the builder's viewpoint on many important matters. AMERICAN BUILDER AND BUILDING AGE is in this fashion speaking for the building industry and helping mold public opinion to view this industry in a proper light, based on facts.

Subjects selected are pressing problems of especial

importance to the building industry right now. For example, newspapers everywhere have published excerpts from the AMERICAN BUILDER AND BUILDING AGE tax reduction campaign. Titles of some of the articles were, "High Taxes Hurting Home Building Industry"; "Excessive Taxation Hinders Revival of Home Building"; "Unfair to Tax Homes to Build Motor Highways".

Some of the articles published have reached an audience running into the many millions. Based on the circulation figures of the hundreds of publications which have co-operated, some 5,000,000 persons were reached in 1930, 20,000,000 in 1931, and 22,000,000 during the first three months of 1932.

Winter building was actively promoted in newspaper articles last fall. Included among the articles were such titles as: "Build in Fall Instead of Spring, Say Contractors"; "New Home Best Christmas Gift".

Getting people to start immediate construction work has been one of the primary purposes.

One of the most important recent subjects which has attracted the attention of many millions of newspaper readers has been a demand for better construction financing conditions. "Home Owners and Home Builders Should Rally to Support of Home Loan Bank Bill" was the title of one widely read newspaper release.

Readers of AMERICAN BUILDER AND BUILDING AGE are invited to take part in this crusade for a better understanding of building matters. If you approve of articles or editorials, call them to the attention of your local newspapers. If there are other subjects you feel are nationally important, do not hesitate to suggest them.



## Spring Homes That Appeal

On this and the following pages are shown designs that have been selected with especial care for their appeal to spring home hunters. A wide range of types, both big and small is included.



Above—whitewashed brick residence at Santa Monica with many attractive details; Gerard Colcord, architect. Right—shingle exterior with pleasant porch treatment. At left—paneled walls, a corner fireplace with copper hood, interesting door hardware. Photos by Mott.



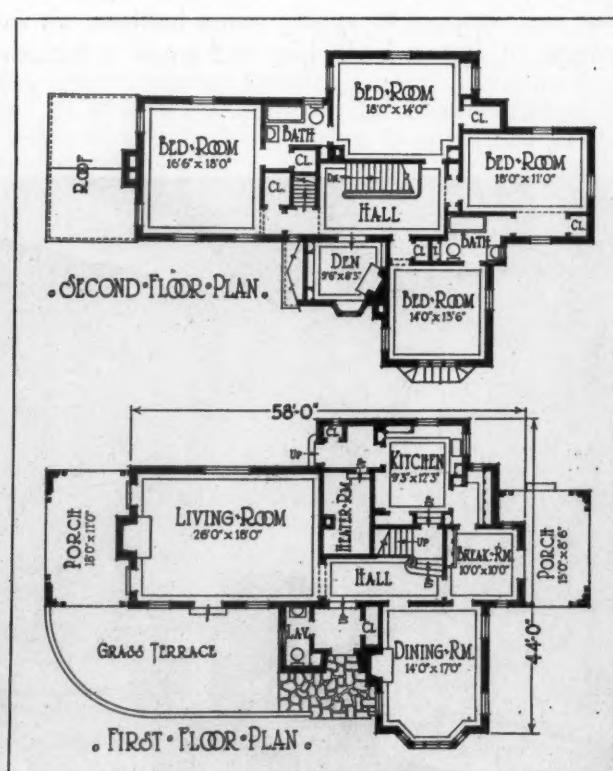
CHARLES W. OLIVER, Architect.

This English exterior harmonizes pleasantly with the tall pines among which it is located in the River Oaks development at Houston, Texas. Rooms are large and well-lighted by the many windows. Interest is attracted by the chimney, entrance and gable grouping.

Below is shown a pleasant bedroom from the Kohler model home on opposite page. The built-in corner cupboard is a useful feature, and fills a common need.

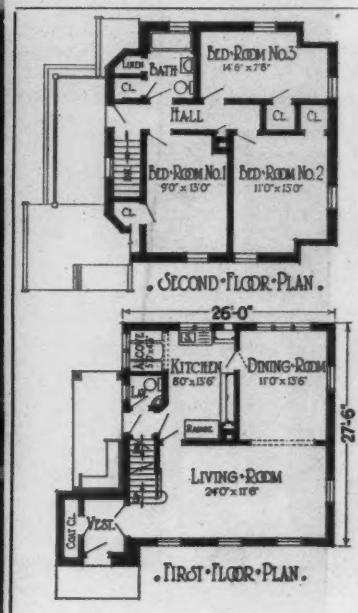


## A Texas Home With Many Attractive Windows



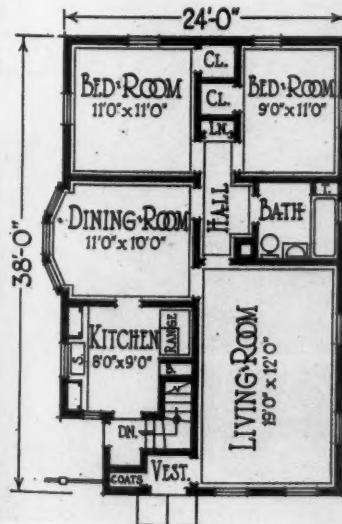


## Compact Model Home



Stucco and brick are charmingly combined in this compact model home built at Kohler, Wisconsin. It is well planned to suit a corner lot.

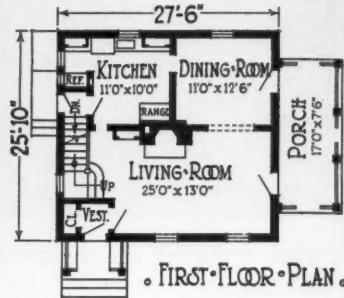
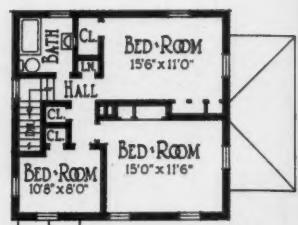
Sleeping quarters have maximum quiet in this colonial bungalow because they are placed at rear. The bay window, arched entrance, and front gable with curving roof line are good features.



Design No. 5-D-33. Copyright Architects' Small House Service Bureau, Inc.

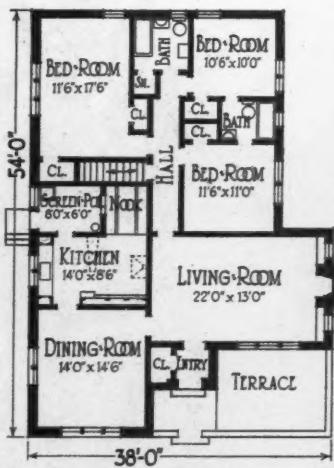


## A New England Colonial



Design No. 6-A-37. Copyright Architects' Small House Service Bureau.

One of the most popular of modern small homes with a very economical floor plan.



Brick and wood are interestingly combined in this small Los Angeles House. The gable treatment is very good and the floor plan is one that has proved practical for the average family. The terrace with front brick wall is an added feature that appeals to people who like to sit outdoors.



De Luxe Building Co.

Photo by Mott.

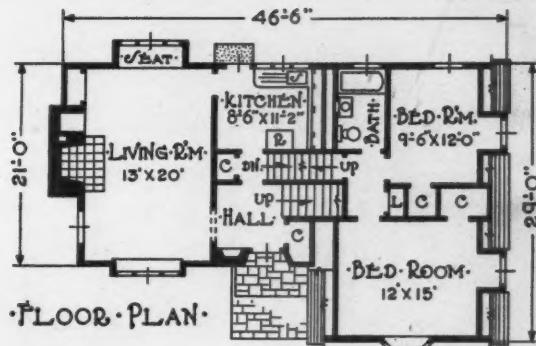


BENJAMIN BETTS, Architect.

Photo by Van Ande.

## Distinguished Simplicity Emphasizes Fine Details

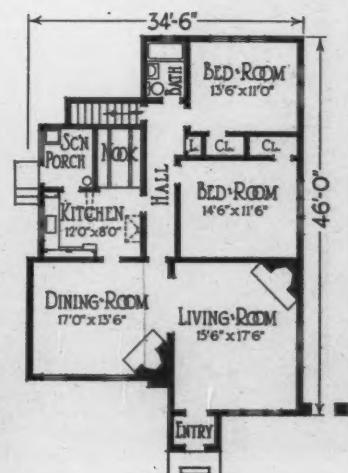
Balance and good proportioning make this home attractive. The general simplicity of the design causes a few of the details to stand out with especial clarity. The windows catch the eye, and the chimney is imposing. Treatment of the entrance is simple but effective.



De Luxe Building Company.

Photo by Mott.

This small house with shingle exterior and sheltered entrance has many good points. There are plenty of windows, a good looking door, fireplace in both living and dining room.



Floor plan is well arranged, convenient, and economical to build. The central hall with doors leading to bedrooms, bath and kitchen is convenient and saves housewife steps.



PAUL R. WILLIAMS, Architect.

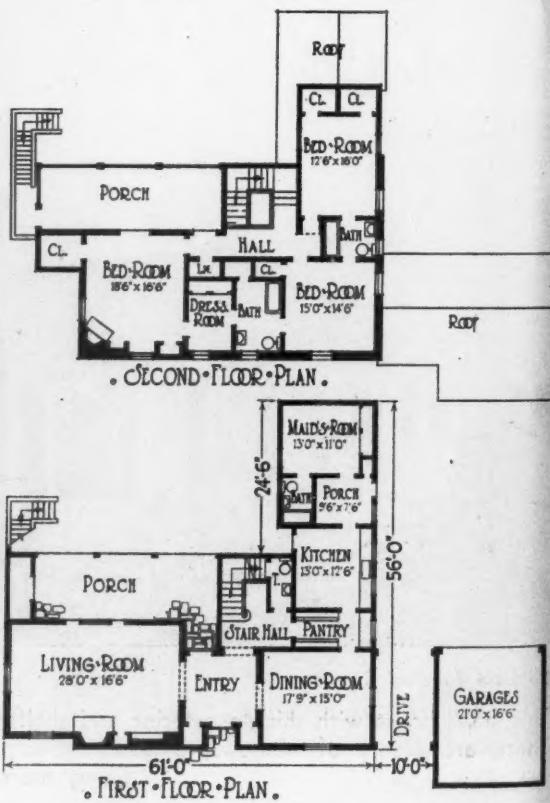


Photo by Miles Berne.

Wide shuttered windows, a pleasant Colonial door and rugged whitewashed brick give this Monterey type house great charm. Note how effectively brick, stucco and wood siding are combined. This type is said to be a California development which grew up when settlers from the East built Colonial homes using Spanish workmen. Early houses of this type may be seen near Monterey, California.

## Monterey—A New Style Growing In Popularity

California architects and builders are combining the best qualities of Spanish and Colonial architecture in a new type they call Monterey. It has great possibilities for the future.



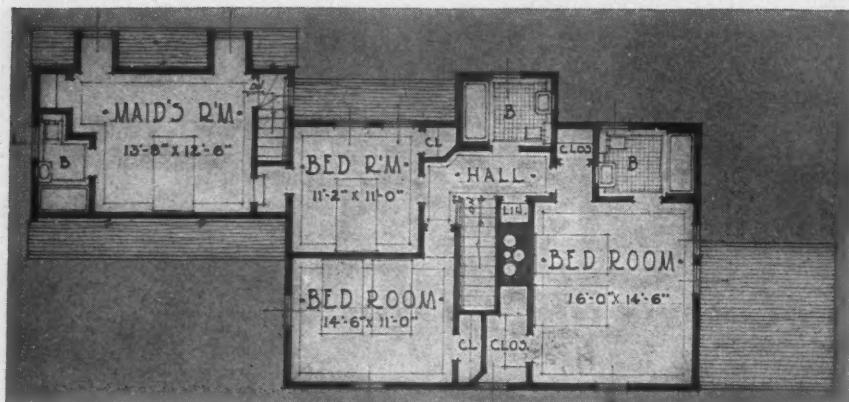


Fine proportioning and handling of mass and detail are shown in this view. The stucco, brick and siding are interestingly combined. Spanish and Colonial elements unite to form a distinctive type of architecture that is new and interesting.



The interiors are done in best Colonial style. Spacious rooms, wide windows, attractive panelling and woodwork make them especially good. The built-in book case, window seat and fireplace are features of the bedroom that please.

# 1932 Homes in the \$20,000 Class...

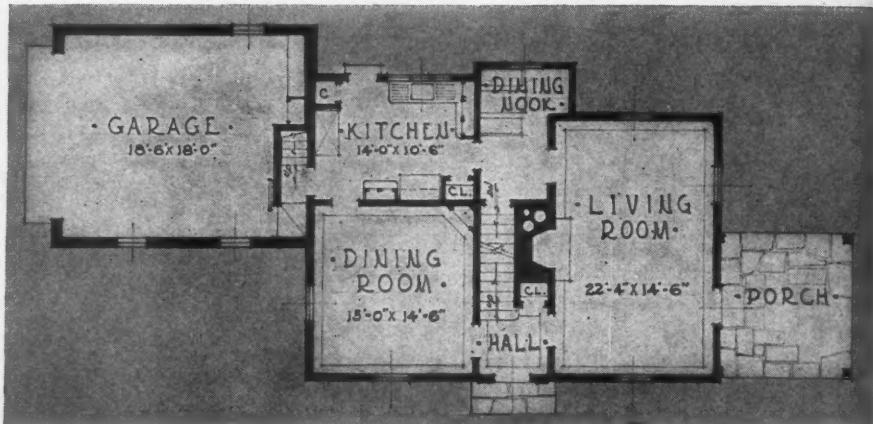


SECOND FLOOR PLAN

The two Colonial homes shown here are being erected in Bronxville, New York, this spring. They are similar in size and general accommodations and since they are built on adjacent properties are designed in harmonious architectural character. The one on this page is of hand-hewn shingles, the other of whitewashed brick. Both are painted white except for the dark green, wide loured shutters. Roofs are of shingles of varying thicknesses presenting a desirable softness of texture. Both homes are simple and frank treatments of farm house Colonial type.

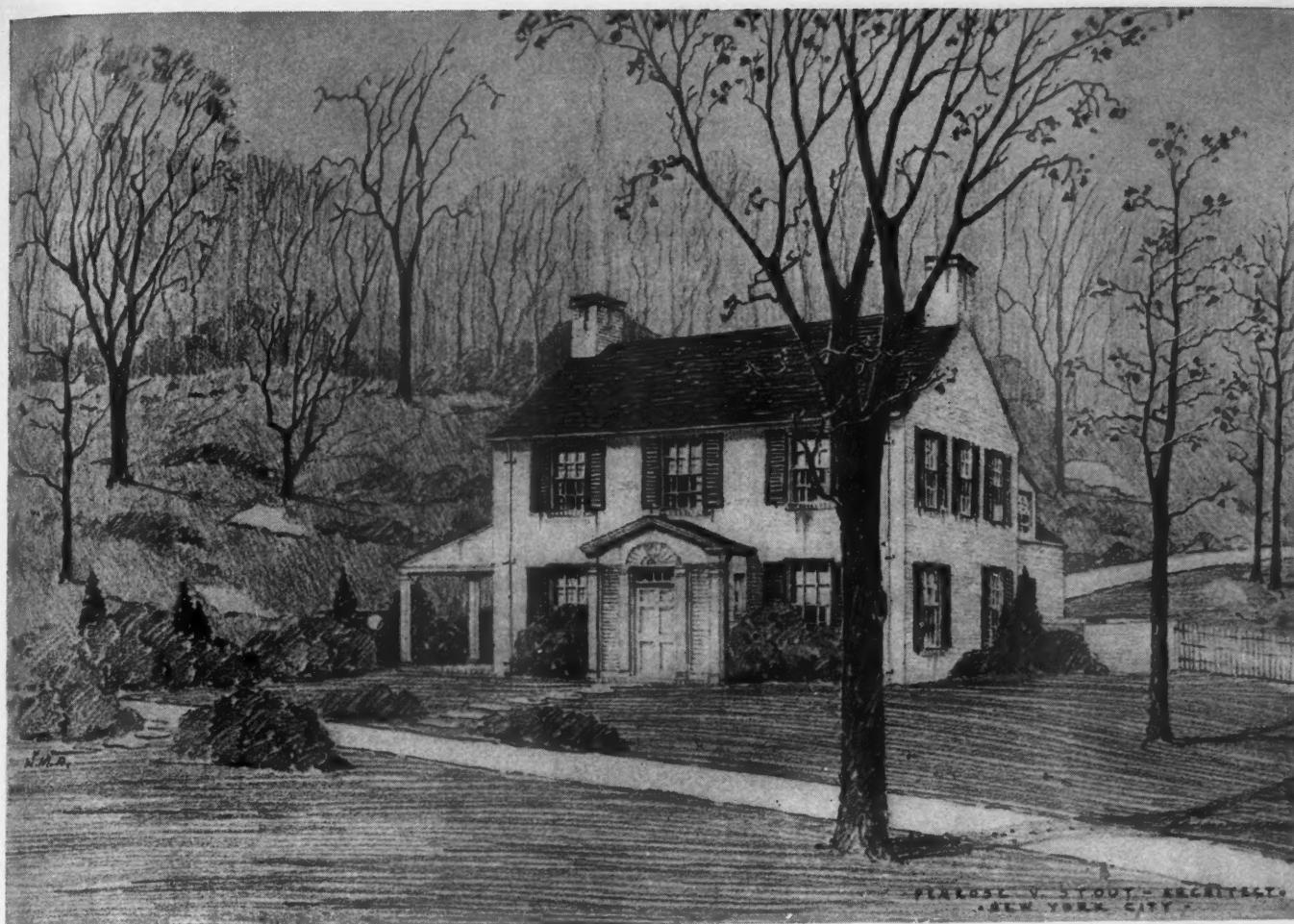
JOSEPH E. LANE  
Builder

PENROSE V. STOUT  
Architect



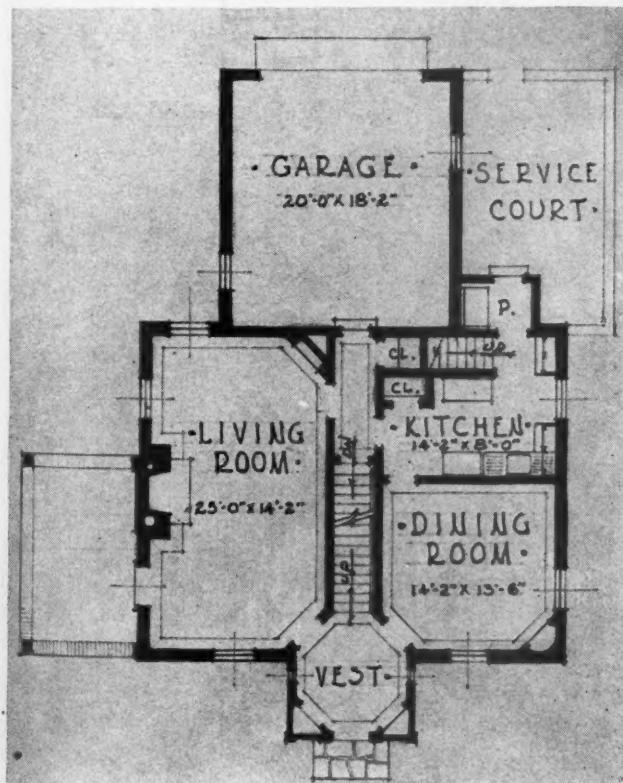
FIRST FLOOR PLAN



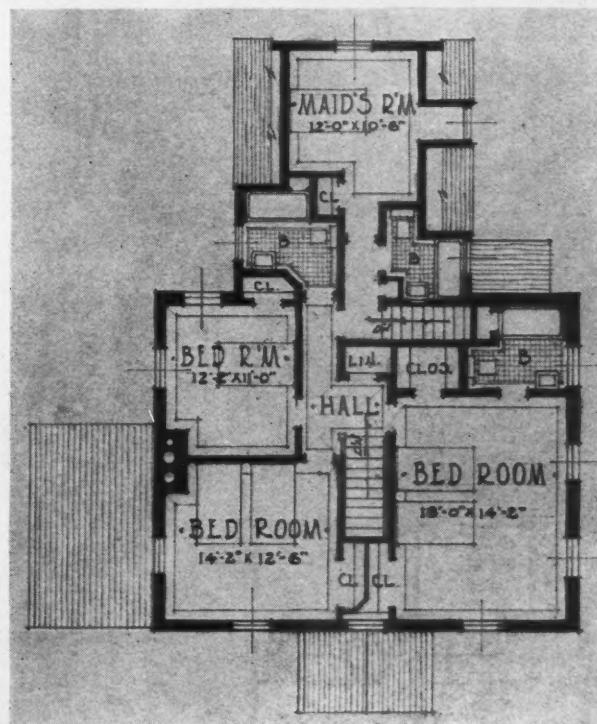


PENROSE V. STOUT, Architect

The floor plans are devised for economy in space and for convenience in living. Garages are conveniently accessible from the house in both cases.



FIRST FLOOR PLAN



SECOND FLOOR PLAN

These Colonial homes are equipped with oil burners, one-pipe vacuum heating, tile baths, playrooms in the cellar, brass piping, copper flashing, and hardwood flooring for all rooms. Walls are simple, hard-finished plaster, appropriate for either paint or wall paper.

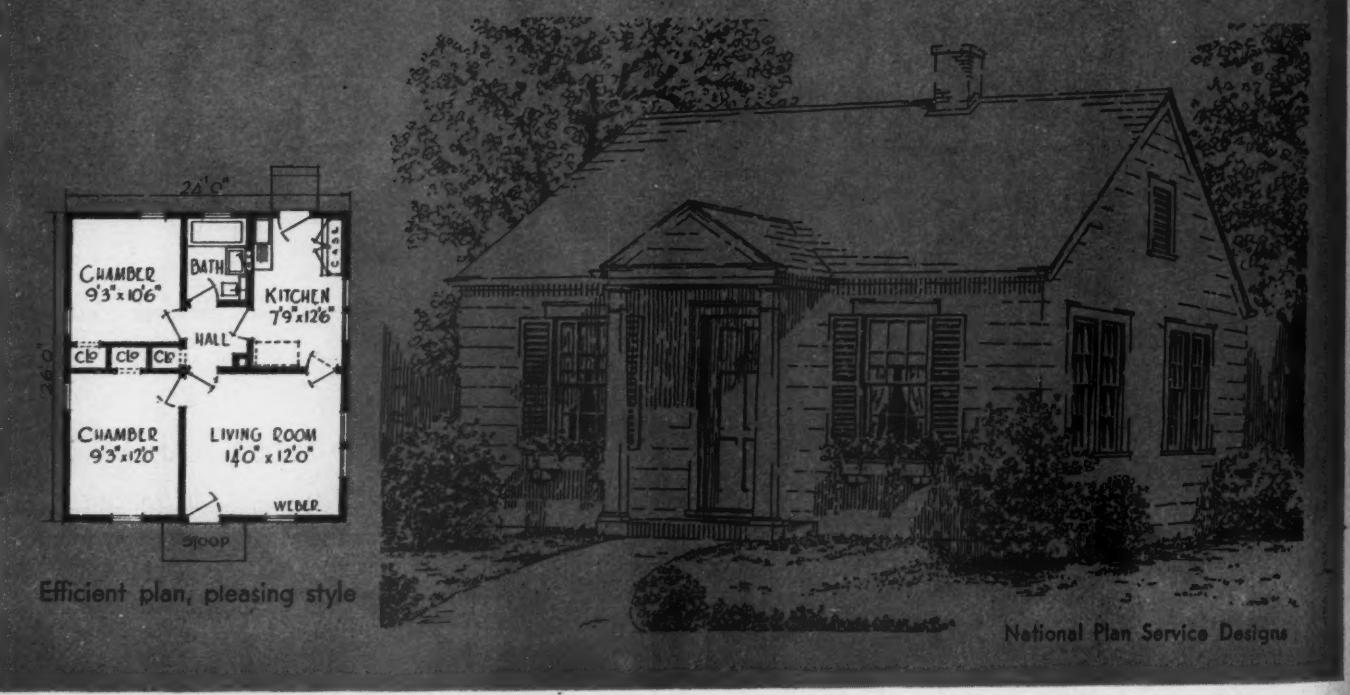
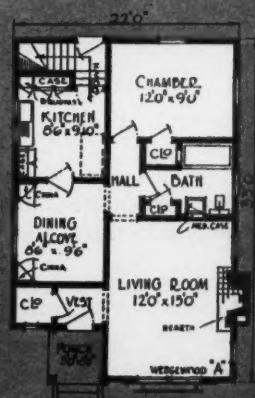


Space for two rooms in attic

### Three Low Cost Compact Houses



Colonial for narrow lot



National Plan Service Designs

# How To BUILD and SELL LOG CABINS

**W**ITH the growing desire of city people for rustic surroundings, the log cabin business has become a large and profitable one. Many builders have gone into this work on a large scale and offer attractive cabins ready for occupancy with a small down payment followed by low installments.

Construction methods for modern cabins, of course, vary with the locality. Many people still prefer to use native logs of the region in which they are located. The use of manufactured log siding has become widely popular in recent years, however, as this can be handled more cheaply and efficiently than native logs.

Log siding of pine, redwood or other appropriate lumber is made with a rounded face and ship-lapped edges in various dimensions, such as 2x6 or 2x8, and in standard lengths. The siding is easy to use and one lap fits snugly over the next so that tight construction is obtained.

Skillful use of log siding results in a cabin that looks natural and "rustic" enough to please any one. Log siding is usually finished on both sides, ready to nail in place. Where the cabin is for summer use only, it is nailed directly to the studding and no interior finish added. For all year use, a layer of rigid insulation board is nailed to the studs on the inside. Over this another layer of log siding is placed which gives the



## THE LOG CABIN IS THE THING TODAY

For ideal vacations and week-end holidays, a log cabin is ready for you or can be built to your order in one of these three restricted communities.

### SUNNYBROOK

is where the seclusion of virgin woods is offered within the budget of the most rigid economy.

### CANDLEWOOD KNOLLS

on the West shore of this great expanse of lake in the Berkshire Foothills reached over paved roads all the way.

### LAKE KATONAH

for year round club community life in the high hills of Westchester, secluded, but with excellent commuting facilities.

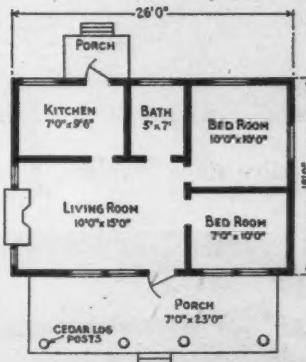
### THE HOMELAND CO. COUNTRY HOME PLANNING EXPOSITION

18-20 East 41st St., Street Floor

*Before making your vacation plans, see the log cabin erected in the Country Home Permanent Exposition.*

Advertisement of  
Homeland Company,  
New York, Which Stirs  
Interest in Log Cabins  
and Creates Sales.

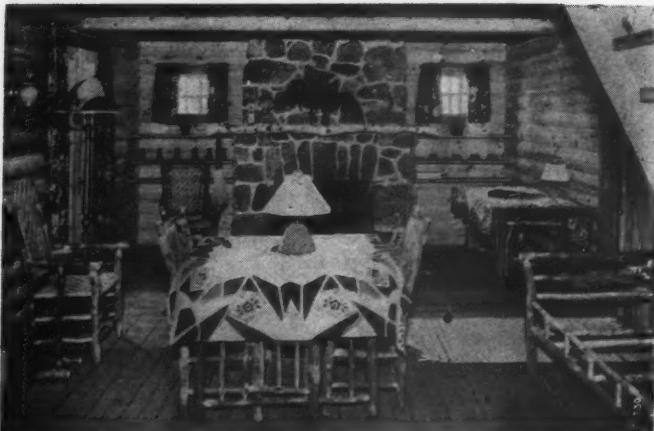
Typical Floor Plan of  
4-room Cabins Built at  
Lake Shenorock, N. Y.,  
to Sell for About  
**\$1,800.**



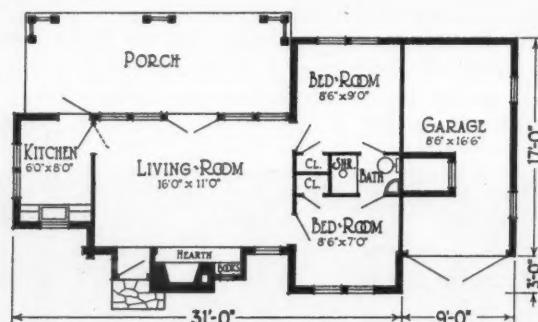
Popular Type of Log Siding Cabin Built by the Lake Shenorock Development Company, Somers, N. Y., That Constructed and Sold 107 Cabins Last Year



Massive stone fireplace in cottage built by Homeland Co., New York. At right—log cabin of permanent construction that fits surroundings well. Chimney is of second-hand common brick.



Two interesting log cabin interiors that have many details worth studying. Above is living room of the Walter Oeflin Cottage at Duck Lake, Mich. Below, cabin at Lake Candlewood, Conn., built by Homeland Co. Both are finished in log siding and have a big fireplace as center feature of the room.



interior of the cabin a pleasing and popular log effect.

A common practice is to vary the log siding by alternating 2x6 and 2x8 inch widths. The rustic effect can be increased by using natural log corners, trim, porch posts, etc.

The Rustic Log Cabin Corporation of New York City which does an extensive business in summer homes reports the following specifications for a typical low cost log siding cottage similar to type shown on page 39.

Girders and sills, built up of 4"x6" fir timber; floor joists, 2"x6" fir timber spaced 24" o. c.; box sill construction; outside wall, studded with 3"x3" fir timber spaces 21" o. c., with door and window headers to make the frame rigid, with 2"x6" plates at floor and 2"x6" built up rafter plates; rafters, 2"x6" placed 24" o. c. with 1"x4" ridge boards; roof boards, 1"x8" tongue and groove ship-lap, roofers laid tight; verge boards, 2"x6" forming a show rafter at gable ends; corners, cedar logs; inside partitions, built of 1"x8" tongue and groove beaded boards set up vertically in a floor plate 2"x3" and a top plate 2"x3" to receive the partition boards; porch posts, 7" cedar posts (rough); floor, 1"x4" flat grain flooring for main building and porch; roofing, wood sheathed tongue and groove and covered with crushed slate surface roll roofing; windows, sash clear white pine with 1 3/8" white pine light; doors, standard lumber mill stock doors, 4 light; porch



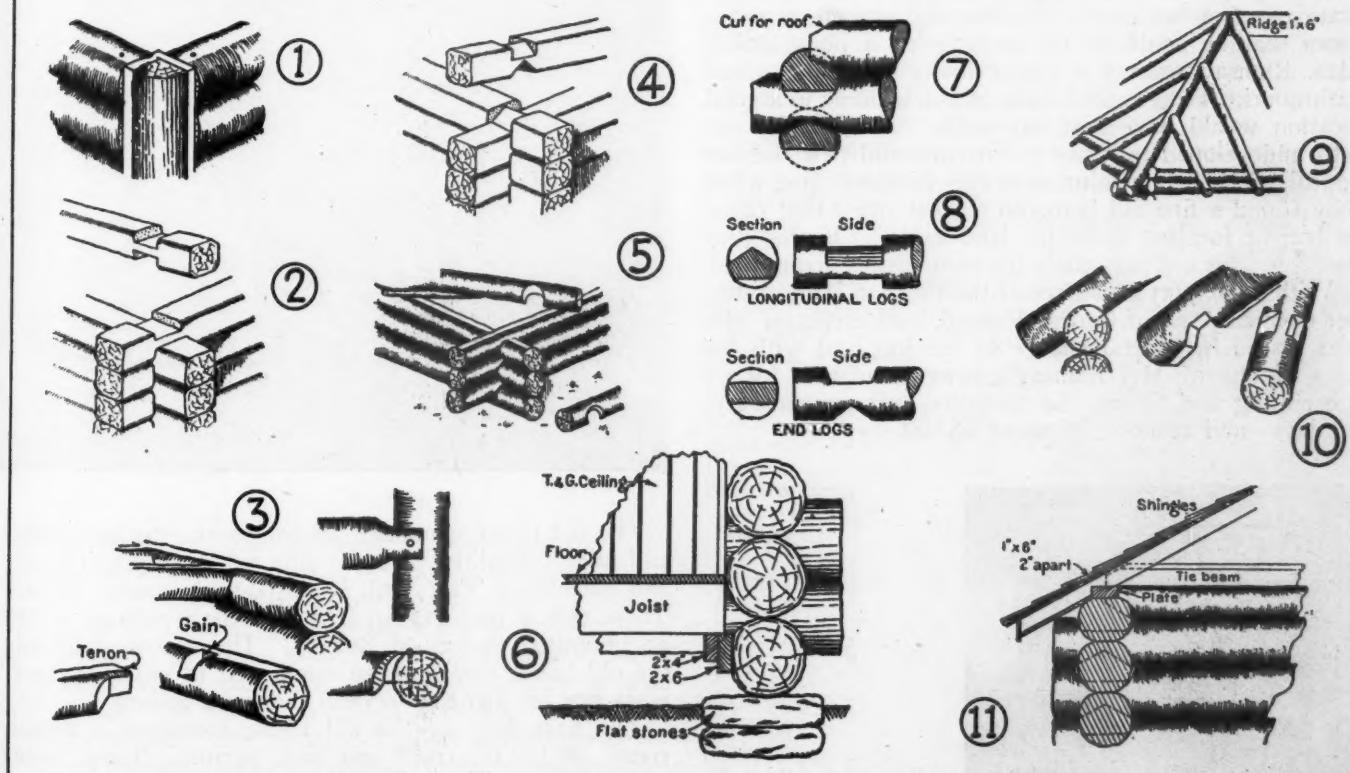
The cabin at left is built of log siding, but the porch treatment in natural logs gives an added rustic air. At right—a sturdy cabin designed by William Cain. Below—fine axe work shown in cabin of C. F. Freilinger of Portland, Ore.

joists, average 3" cedar logs spaced 24" on center, supported by same size cedar logs.

Construction of log cabins from native logs secured at the location requires considerable skill and experience. Local conditions and local customs vary. Two publications taking up this subject are U. S. Department of Agriculture Bulletin No. 1060 entitled, "Use of Logs and Poles," obtainable for 10 cents, and Lumber Facts No. 12 entitled, "The Charm of the Log Cabin," published by the National Lumber Manufacturers Association, which is offered free.



## Cabin Construction Details



Figs. 1, 2, 4, 5, 7, 8 show methods of cutting and notching logs for corners. Fig. 3—A difficult but very rigid joint between joist and sill. Fig. 6—Floor level should be in line with face of wall log. Fig. 9—Ridgeboard makes straight roof line; note that hip rafters are larger than common. Fig. 10—with this type of joint it is difficult to keep the eaves level. Fig. 11—A good method of ending wall.

# "Doubled in Value"

**Woodworker Executive  
Demonstrates in His Own Home  
That Modernizing Pays**

## Power Machine Cuts Costs

**T**HIS is the story of a building industry man who took his own advice.

H. L. Ramsay, vice president of a Chicago concern making portable power woodworkers, had often recommended home modernizing to others; in fact, he was well known as one of the original boosters for modernizing back in the days B. D. (Before the Depression) when new work had the call and rehabilitation was generally scorned by builders as too small and disagreeable to bother with.

Ramsay, you see, discerned in the cutting out of old floors and partitions and in the matching of old style special trim much work and opportunity for his line of power machines on the job. So, naturally, he was right there among the pioneer advocates of rebuilding and modernizing old homes and other buildings to restore their value and earning capacity.

Some doctors refuse to take their own medicine; and many home-owning advocates-builders of homes—live in rented quarters. So, too, there are those who have preached modernization without permitting it to strike in personally. But not so, Mr. Ramsay.

Last spring, a larger house was needed by the Ramsay family. Their Oak Park home no longer sufficed. The daughters were growing up and each wanted a separate room of her own. Mr. Ramsay wanted an extra room that he could fit up properly as a home office. Mrs. Ramsay wanted a bigger living room and more bathrooms. To get all of these in a new home in a good location would have cost too much. To go away out into undeveloped territory to buy or build new did not appeal. The happy solution to this problem came when they found a fine old home on a good street that could be bought for just about the land value. On this they decided to try out personally the home modernizing plan.

With the expert assistance of the Edward Hines Lumber Company and of George Freund, boss carpenter who was placed in general charge of the job, and with the help of one of Mr. Ramsay's power machines for all the cutting and fitting, the operation was completed in 53 days—and at a cost of about \$5,500.

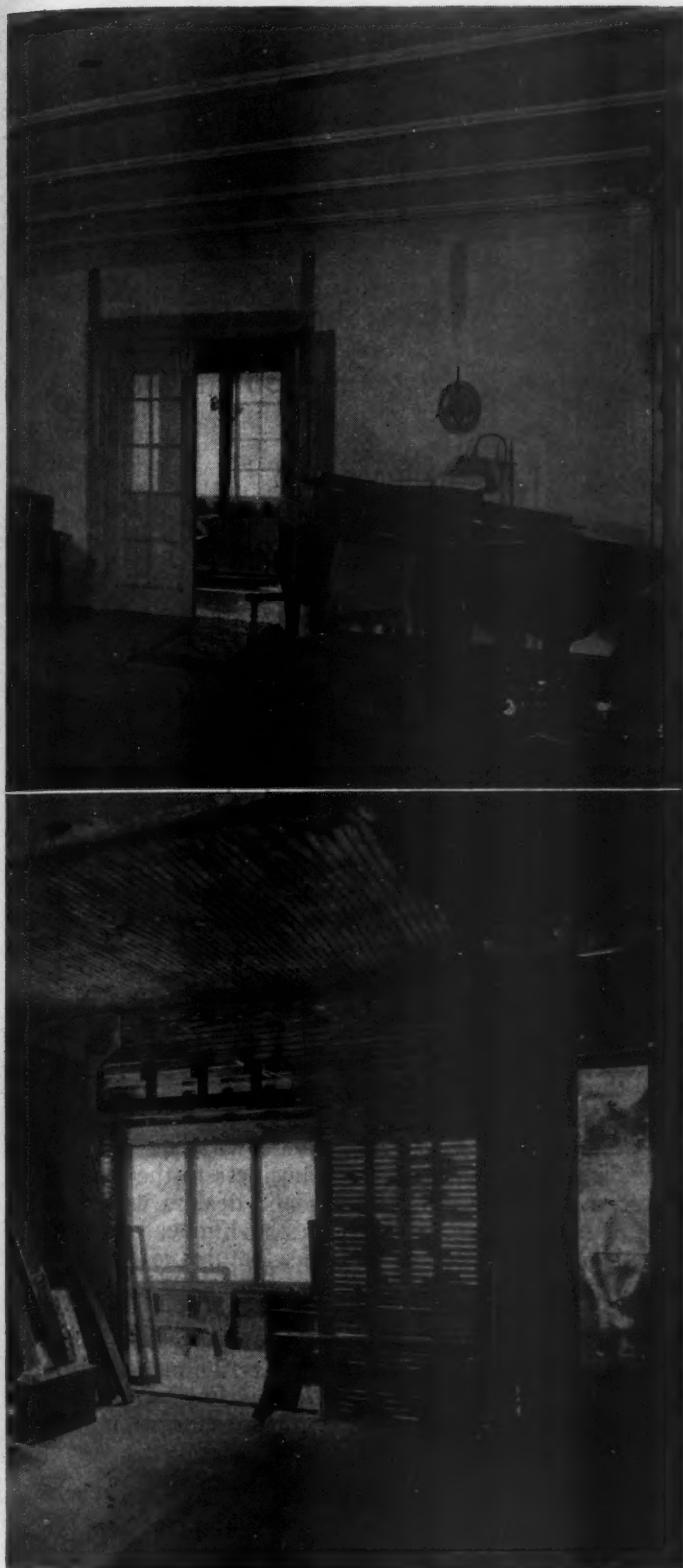


The old house contained seven rooms, was well built and had possibilities. It was situated in a nest of trees and shrubbery that had been planted years before. There was a rear garden in which there seemed to be an unlimited variety of flowers. The surroundings of the old house could not be duplicated in years of hard work nor for less than several thousand dollars.

The first floor of the old house contained a music room, 14 by 14, front and back parlors, dining room and kitchen. The music room was converted into a library or home office. The closet underneath the stairs which opened into the dining room was changed so that it opened into the library, which provided ample space

Enjoying the new wood-burning fireplace in the enlarged living room.





Below we see the work in progress; Front and back parlors are thrown together; Open porch converted into a solarium. View above, photographed from the same point, shows the job finished.

Two of the three bedrooms which were in the old house remain intact. The third, which was very large, was reduced in size and provided ample space for one of the new bathrooms placed on the second floor. They raised the roof at the back of the house and built an entirely new master bedroom, 15 by 16, with a private bath.

In remodeling this home, wall board replaced plaster. The Ramsays feel that they can look forward to years of service with no checked or cracked plaster to mar the walls and ceilings. Artistic panels were worked out in the living room, dining room, kitchen and bedrooms with this wall board at a surprisingly low cost, and the beautiful effect was achieved at no greater cost than plaster.

Beamed ceilings were worked out in the living room and dining room economically and effectively. The effect was gotten by nailing two strips of 1 by 2's eight inches apart, and to each was nailed a strip of wall board eight inches wide. Along the side of these strips was nailed a strip of moulding. Cove moulding and picture frame moulding where the ceiling meets the wall completed the effect.

The ceilings in the library, bedrooms and kitchen are paneled in various designs. The monotony of plain walls and ceilings has been eliminated, and the wall surface lends itself into working out many attractive decorative plans.

A fibre-board tile instead of ceramic tile, was used on the walls of the bathrooms and kitchen, a beautiful material which is obtainable in a variety of colors. This material is chosen in preference to tile, when remodeling, because it adds very little weight.

Upon completion of the work of modernizing and during the 1931 period, which was probably the worst in the history of real estate, the owner has had a bona fide offer of \$20,000 for this modernized home.

The original cost of the property, including the house was.....\$8,500

Lumber, frames, sash, flooring, moulding, upson board, ty- lac, etc.....	\$1,740.00
Carpenter and labor.....	1,690.00
Plumbing supplies, fixtures...	419.38
Plumbers .....	342.60
Mason (labor & material) .....	395.00
Roof (labor & ma- terial) .....	110.00
Electrical supplies	58.00
Electrician .....	163.00
Hardware .....	75.29
Glass .....	39.00
Furnace, gutters & down spouts ...	215.00
Painting .....	302.00
Total Cost .....	\$14,000

for a small first floor bathroom. The front and back parlors and the space formerly used for an inside stairway to the basement were thrown into one large living room, 25 by 16 feet. A fireplace was built in the center of the side wall, and a solarium of knotty pine replaced the old open porch. Part of the old kitchen is used for a stairway to the basement and also for a large storage space. The remainder gives ample space for modern kitchen facilities including electric refrigerator. The old stairway, which was of beautiful walnut, was left intact, although the door has been replaced by an arch which blends in with the other doorways entering the living room.

Ramsey furnished the power machines; car-  
penter easily picked  
up skill in its use.



# NEW CONSTRUCTION SCHEMES CUT COSTS



**More Shop Fabrication**

**Less Time on the Job**

Side wall and  
roof units built in  
the shop being  
set up on the job.

OWER costs for homes, garages and other small to medium sized structures are expected to result from each of three new developments in the small construction field involving shop fabrication to an advanced degree, two of them utilizing lumber, the other steel. Builders and dealers may see opportunities for local business in one or more of these.

Pre-fabricated round-top buildings, illustrated on this page, combine a new method of construction with a distinctively new design in such a manner as to produce unusual economies in material and labor costs.

This type of construction originated as the invention of Herman E. Harvey of Bellefontaine, Ohio, and was first incorporated in farrowing houses and chick nurseries. The present models include, in addition, tourists cabins, lake cottages, gas filling stations, restaurant diners and a four-room house. A six-room two-story house is

now in the process of development. Each building is completely lined with one-half inch insulation board, and is ventilated by a special sash construction.

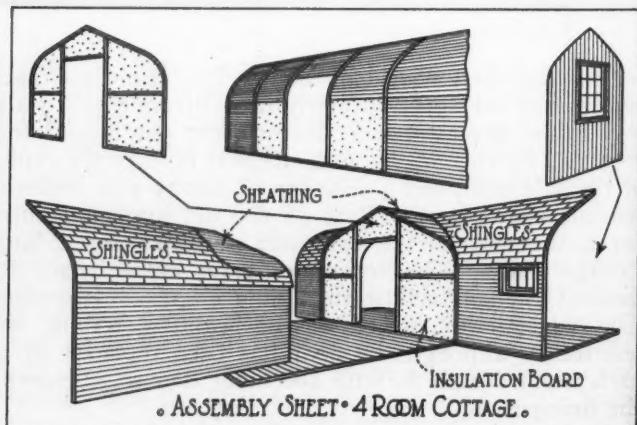
Round-Top buildings are manufactured in the lumber yard or mill, over templates and patterns so simplified in detail that they require only a band saw for cutting. Stock materials of the usual quality are used throughout. These buildings are usually fabricated in five units, which are fitted before delivery. A delivery crew of two carpenters and two helpers can completely erect the five units of the 12 by 20-foot cottage in four hours' time.

The four-room house, consisting of living room, two bedrooms, dinette-kitchenette, wardrobe, pantry and bath room, delivers completely erected and ready for occupancy for less than \$750.00. This includes insulation throughout and a prime coat of paint on the exterior.

Due to quantity production of stock parts, utilization of standard material items and low labor costs, the round-top line opens profitable business to the manufacturer and distributor. Builders and dealers were showing a great deal of interest in the lumber association meetings last winter where the features of this new line were on display. They were getting all information not only as individuals who might want to own and occupy one of these clever little low cost buildings as a summer cottage, but also as prospective manufacturers and selling-installing agents for this line of buildings. The Bellefontaine Lumber Company acts as a manu-



To left: outside and inside views of one room and kitchenette cottage. Below: units for a four room cottage.



facter and distributor in its own territory, and sells the manufacturing and distributing privilege to other lumber companies and individuals on a royalty basis. All of Ohio, as well as a portion of Indiana and Michigan, are at present under contract.

## ENTERLOCKING LUMBER

At the recent meeting of the Southern Pine Association in New Orleans, a section of a full-sized house was erected in the convention hall, with Enterlocking units. This idea has been perfected and patented by E. A. Laughlin, of Port Arthur, Texas. It includes the manufacture of the fabricated sections at the mill, and eliminates the large waste so prevalent in ordinary frame house construction. One of the outstanding features of enterlocking lumber is its great flexibility in house design. Although the units are standardized they lend themselves very readily to different types of architecture.

Under this new plan the builder will go to the retail dealer with his plan and say, "I want lumber for this building." Regardless of the design the retailer, after a little figuring will say: "All right, Mr. Builder, here you are, you will require so many sills (stating the number), so many joists, so many rafters, so many feet of sheathing, flooring, siding, etc." The sills will be grooved on 16-inch centers ready for the joists and each joist will be tongued in an ingenious manner so that there is only one way in which they can be fitted into the sills and that will be the right way. The same will be true of the plates and studding. Rafters are cut with a half-circle seat which permits the same length of rafter to be used or several different spans and pitches.

Sheathing, flooring and siding will be cut in six lengths—sixteen inches and multiples thereof, up to 12 feet, ready to nail on. Sheathing and sub-flooring will be cut at an angle so that when put on they will make a much stronger building.

In other words, more than three-fourths of the work now done by the carpenters on the general run of frame buildings will be performed at the mill by special machinery at a lower cost. Furthermore, this practically eliminates the large pile of waste lumber usually found at new buildings, reduces the amount of freight on the lumber which actually goes into the building, also the number of feet which the consumer must purchase. It also speeds the erection on account of the less amount of work at the building site. It will also be a better finished and stronger product than the usual building erected in the ordinary manner.

From the manufacturing end one great advantage will be the utilization of what is now low grade lumber, for the shorter lengths

(Continued to page 46)



Dovetailed joints between joists, studs, sills and plates guarantee a strong, easily assembled job. Rafters are factory notched to fit half-round bearings so that one stock length fits many pitches.

### SUGGESTIVE STOCK ORDER OF FABRICATED BUILDING LUMBER ENTERLOCKING SYSTEM

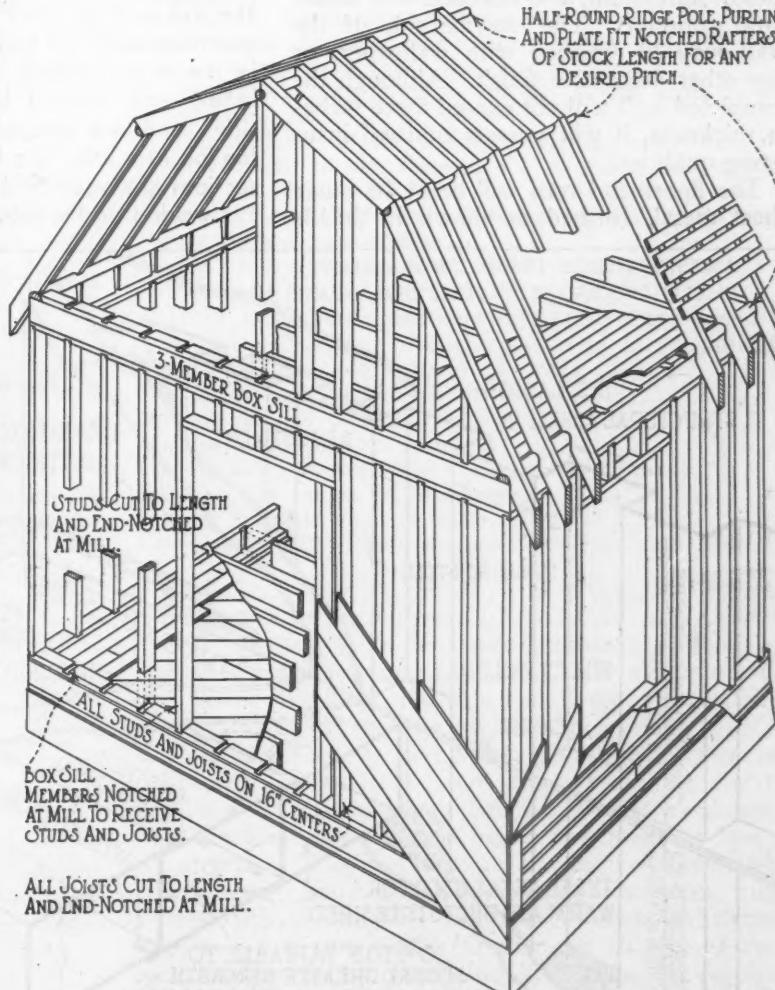
#### SCHEDULE OF EXACT LENGTHS ON 16" CENTERS

9 LENGTHS OF FLOOR & CEILING JOISTS 2x4 to 2x12 (81 combinations)	9 LENGTHS OF COMMON RAFTERS 2x4 & 2x6 (10 combinations)	3 LENGTHS OF STUDS 2x4 & 2x6 (any combination)
---	---	--

JOIST ORDER	RAFTER ORDER	STUD ORDER
50-2x8. FJ. 9' 1 1/4"	100-2x4 7' 3"	200-2x4 7' 10 3/4"
50-2x4. CJ.		
50-2x8. FJ. 10' 5 3/4"	150-2x4 8' 5 1/2"	400-2x4 8' 10 3/4"
50-2x4. CJ.		
75-2x8. FJ. 11' 9 3/4"	150-2x4 9' 8"	100-2x6 9' 10 3/4"
75-2x4. CJ.		200-2x4
75-2x8. FJ. 13' 1 1/4"	150-2x4 10' 10 1/2"	Headers, cripples gable-studs 2x4 & 2x6
75-2x4. CJ.		
50-2x10. FJ.		Order
50-2x8. FJ. 14' 5 3/4"	200-2x4 12' 1"	
100-2x4 . CJ.		
50-2x10. FJ.		
50-2x8. FJ. 15' 9 3/4"	200-2x4 13' 3 1/2"	500-2x4 3' 10 3/4"
100-2x4 . CJ.		
50-2x10. FJ.		
25-2x8. FJ. 17' 1 1/4"	150-2x6 14' 6"	400-2x4 5' 2 3/4"
75-2x6 . CJ.		
25-2x10. FJ. 18' 5 3/4"	50-2x6 15' 8 1/2"	100-2x6 6' 6 3/4"
25-2x6 . CJ.		200-2x4
25-2x10. FJ. 19' 9 3/4"	50-2x6 16' 11"	20-2x4 7' 10 3/4"
25-2x6 . CJ.		50-2x4

#### ORDER FOR BOX SILLS AND PLATES

2x4 to 2x12—10' 0" to 20' 0" lengths		Box sill notched 16" centers	
500 lineal ft.	2x10-10 to 20 ft.	Box sill notched	"
1000 "	2x8 "	"	"
5000 "	2x4 "	Plates	"
300 "	2x8 "	Box Sill	24"
100 "	2x4 "	Plates	24"
1x4 Roofers 16" to 144" 9 lengths ORDER 5000 ft.		1x6 C. M. Diagonal 24" to 144" 6 lengths ORDER 5000 ft.	1x8 shiplap Square ends 16" to 144" 9 lengths ORDER 15000 ft.
1x6 siding Square ends 16" to 144" 9 lengths ORDER 5000 ft.		1x6 siding Square ends 16" to 144" 9 lengths ORDER 5000 ft.	1x4 flooring Square ends 16" to 144" 9 lengths ORDER 5000 ft.



of siding, sheathing, flooring, etc. By this method all defective spots are eliminated, thus bringing the lumber up to higher grade.

Just how much cheaper this method will be to the builder cannot be stated at this time, as everything has not been fully worked out, but the saving will be considerable.

## THE FRAMELESS STEEL HOUSE

The dream of a method of home construction which provides heat and sound insulation and fire protection at no greater cost than the prevailing frame construction may be realized if the experimental "frameless" house planned by Mills G. Clark of Insulated Steel, Inc., of Cleveland, proves a success. The American Rolling Mill Company and Westinghouse are also interested in this project. For several months architects and engineers have been working out the plans for this house, to be built soon in Solon, a Cleveland suburb.

The house will be built entirely of sheet metal insulated and protected on both sides. For the walls, box-like corrugations will be pressed in flat sheets, forming sections one, two, or three feet wide, and of the length necessary. These small units will be welded together in the shop, story high and room wide, and the walls for each home hauled to the site in one piece. No structural steel work will be necessary.

For insulation and sound proofing, the box-like corrugations will be filled with rock wool; then a layer of insulation board will be fastened to the protruding sheet metal with a structural adhesive, both inside and out. Exposed to the weather will be a layer of asbestos tiles or aluminum, also fastened with structural adhesive. The interior side of the wall may be finished with wallpaper, or any other decorative finish. Although the completed wall will not exceed three inches in thickness, it will possess unusual insulating qualities.

The floors and roof will be of 16 gauge sheet metal, formed as shown in details

The wall sections story high and room wide are laid out in the shop, welded, insulated and finished both sides, and are erected on the job as a unit. The floor sections are assembled and welded on the job.

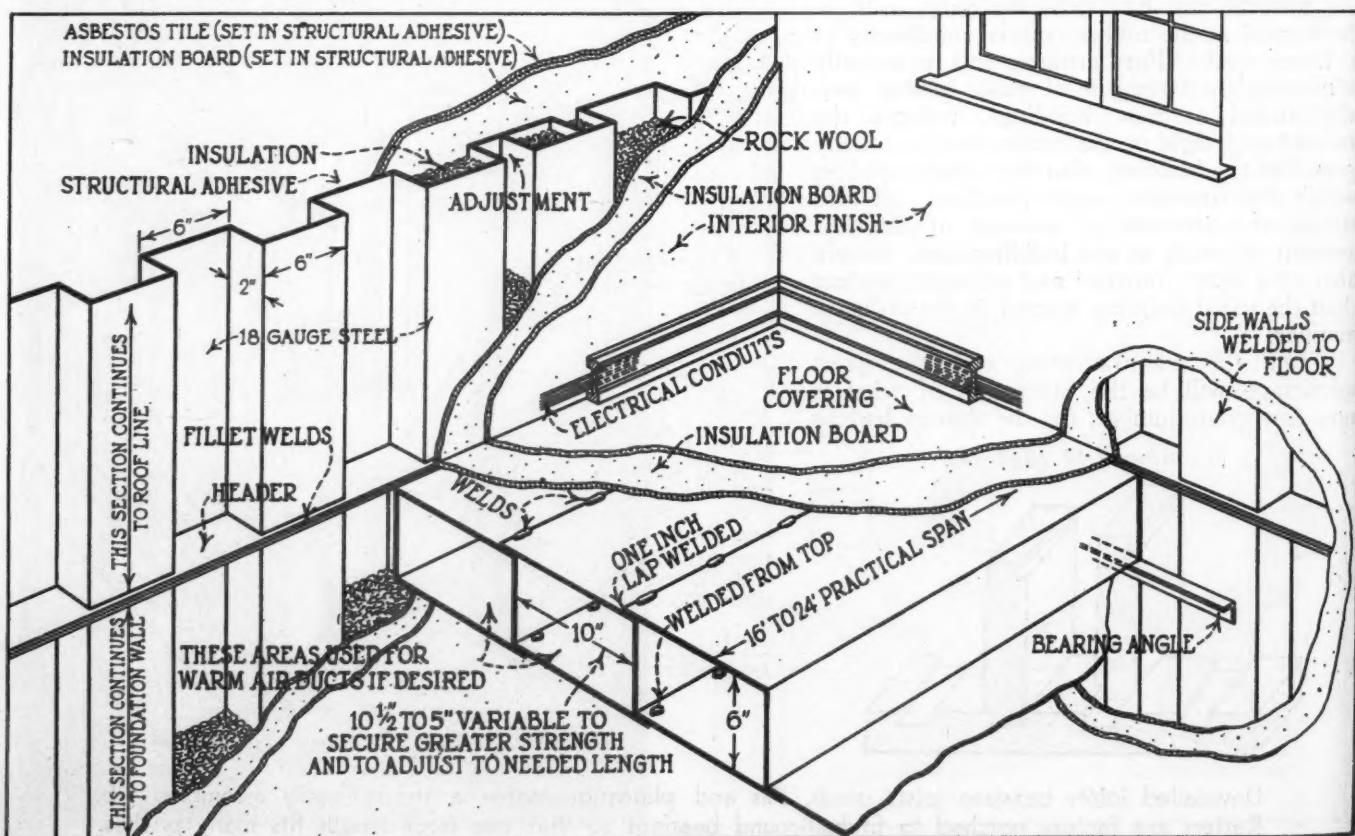
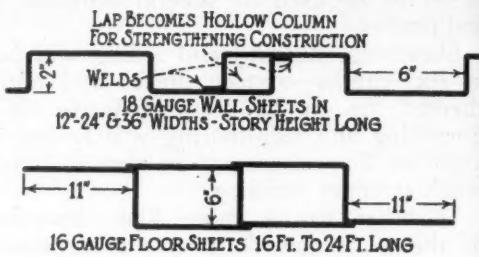


Forward-looking design selected by Mills G. Clark for his first frameless steel house to be built at Solon, O.

and welded on the job to form a series of strong metal boxes 6 inches high by 10 inches wide.

Officials of the company believe they can have this first house ready for occupancy within thirty working days.

Electric welding, which will play such an important part in the construction of this steel house, has already been used rather extensively in erecting the framework of larger buildings. Some of the welding will be done at the plant, but a large part of it will be done right on the job as the walls and floors are assembled.





Above: Electric saw with abrasive disc used in routing, cleaning and tuck-pointing the marble joints on the steps and terraces of Field Museum, Chicago.

## Five Times as Fast!

### Performance Records Settle Old Argument of Electric Hand-Saw vs. Ordinary Hand-Saw

To those builders who have tried them, it is so obvious that a carpenter, using an electric hand-saw can do faster work than he could with an ordinary hand-saw that no detailed proof is needed. However, a few definite comparisons, taken from the experience of several users of electric hand saws will give builders estimating data from which they can reach their own conclusions:

An electric hand-saw will rip a 2" plank 12 ft. long in 20 seconds. To do the job by hand takes at least four minutes.

An electric hand-saw will cross cut ten 3x4 studs in 20 seconds. Time required for this operation by hand is approximately 2½ minutes.

An electric hand-saw will rip out 60 feet of old maple flooring in 3 minutes. Time required for this operation by hand is approximately 4 hours.

An electric hand-saw will cut out a 16 step stair stringer from 2" rough lumber in 10 minutes. With an ordinary hand-saw the job would require approximately 50 minutes.

An electric hand-saw will cut off 222 feet of ¾" decking in 10 minutes. This job done by hand would require over three hours.

The time saving feature, while the most important one, is not the only advantage of the electric hand-saw over the ordinary hand-saw. The following points deserve just as much attention:

1. The electric hand-saw is accurate, and therefore improves the quality of the work.

2. The electric hand-saw is operated without effort, providing a definite saving in actual labor.
3. The electric hand-saw makes certain cuts which cannot be satisfactorily performed with any other type of saw.

The rate at which the saw will cut through a piece of lumber depends on several factors:

1. The diameter of the saw blade. (A 12" blade will cut faster than one 8" in diameter if the same number of R. P. M. are maintained under load.)
2. The kind of lumber that is being sawed. (A pine board can be cut more easily than one of maple.)
3. Whether the operation is one of ripping, cross-cutting, bevelling, etc.
4. The thickness of the board. (Twice as much time will be required to saw through a 2" board as a 1" board.)
5. The convenience of the work. (It is easier to saw off a number of 2x4's on saw horses than it would be to cut out a section of floor.)
6. The skill of the operator. (Skill is simply a matter of experience.)

Here is a tabulation showing the average speed of sawing for a number of operations in sq. in. per minute:

Sawing off tops and bottoms of doors.....	30
Sawing through two hardwood floors.....	48
Ripping out old 3" maple flooring.....	63
Cutting out panels on forms.....	64
Cutting out a 16-step stair stringer from 2" rough.....	64
Beveling 2x4 rafters to 50 degrees.....	114
Making fire cuts on 2x14 joists.....	124
Cross-cutting 3x4 studs.....	180
 Total .....	687
Average sq. in. per minute.....	86

Some sawing jobs, like cutting through a floor, are almost impossible with a hand-saw. For example: On one job of this kind, a double floor with a maple finish on top was cut at the rate of 300 feet per hour with an electric hand-saw as compared with only 5 feet per hour with an ordinary hand-saw. (Here the electric hand-saw is 60 times faster than an ordinary hand-saw.)

In view of the above, a figure five times as fast is conservative. For instance, a Chicago contractor, who specializes on building and remodeling residences, made a test when cutting an old roof. With an electric hand-saw this man could cut through 16 feet of roof including the roofing material in 30 minutes. It required 155 minutes to do the same kind of cutting with an ordinary hand-saw.

# How I Lay Floors in Mastic

The New and Better Way  
of Floor Laying and Floor Finishing

Told by JOHN ECKSTROM

Chicago Flooring Contractor

**A**BOUT six years ago, we began to lay hardwood floors in mastic, direct to the concrete or rough wood sub-flooring, instead of using clips or screeds and nailing. Several advantages were apparent at once which appealed greatly to building owners: (1) elimination of creaks and squeaks, (2) no warping or cupping, and (3) a saving of two inches per floor in thickness, which is a substantial item in a multi-storyed building.

The mastic we use is an asphalt product, one type for use cold and another hot. The mastic coat is applied to the under-floor  $\frac{1}{8}$  to  $\frac{3}{32}$  inches thick and the flooring units pressed into it. When the under-floor is very uneven we build it up with alternate layers of hot mastic and tar felt to the required height and level surface.

We always allow two weeks after laying in mastic before sanding the floor and finishing. We gave up hand sanding long ago. The machines (of which we have twelve) do a better job and turn out the work six times as fast. On the best work, finishing new floors, we take four cuts; we go over the surface first with No.  $1\frac{1}{2}$  sandpaper, then with No. 1, then No.  $\frac{1}{2}$ , and last with No. 00. We consider 800 to 900 square feet of finished floor a good day's work for a machine and one operator.

Some special floor finishes have been developed that produce very superior results when used instead of varnish—permitting us to guarantee such floors for five years. These finishes come in various colors, such as

brown, green, red, blue. Brown is the most popular color for homes.

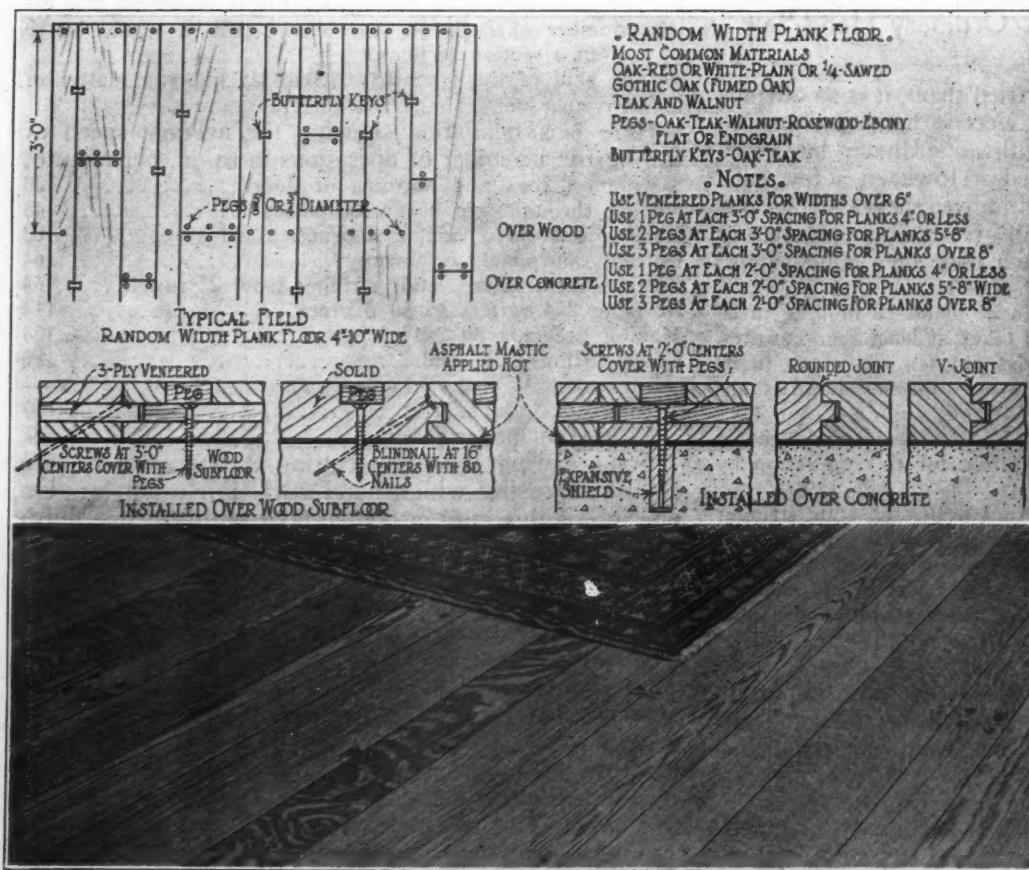
Of late, there has been a great revival of interest in plank floors, or so-called ship decking. We lay the planks in mastic, and also nail and screw them down onto either concrete or wood sub-floors. (See detail below for specifications we recommend.) The plank floors run about 20 per cent more costly than the same grade of block pattern floor. The use of built-up veneer flooring is increasing, and planks wider than 5 inches should always be of built up stock to prevent warping.

The refinishing of old floors is a science, and we find a lot of such work to do. If it is an old heavily varnished floor, hard to resurface, we first use kerosene to soften the varnish, then sand with No. 4 (rough) paper. We follow this with successive cuts, using No.  $2\frac{1}{2}$ , No. 1 and finally No.  $\frac{1}{2}$ . If the old floor is extra rough or if it is a heavily painted old soft wood floor, we use a special sand drum tool of 22-gauge sheet steel made like a coarse rasp or like a cheese grater. In using this, we cut with the grain and it gets results.

We find that floor laying and finishing is a steady, all-year-round business, with plenty of prospective jobs.



JOHN ECKSTROM





## THE HOUSE OF THE MONTH

**Modern Summer Cottage  
at Lake Mohawk, N. J., can  
be used the year 'round**

**ARTHUR D. CRANE CO.  
DESIGNER AND BUILDER**

### ANALYSIS AND COST ESTIMATES

By G. WILLIAM BAILEY

In the spring the fancy of the city dweller turns more longingly than lightly to thoughts of "a place" in the country. Summer cottage planning and building time is here; and those skilled in the art of rustic construction find many interested. As a contribution to this seasonal movement, there has been selected for the May "House of the Month" a delightfully quaint little lake cottage built in northern New Jersey. Cost estimates and scale drawings are presented on the next two pages. They merit close study.

Two costs are given—the first as built for more or less all-the-year occupancy, the second, using the customary cost-saving summer cottage construction.

To these estimates proper additional allowance must be made for local fees and permits, liability and compensation insurance, fire insurance, contractor's field supervision, overhead and profit. Any builder or architect can take my quantities and arrive at a readjusted cost for this house to fit any given set of local condi-

tions or variation of specification which seems more adaptable to them or their local prospects.

Detailed specifications are shown on the following page for estimate "A." The changes in the specifications for estimate "B" are explained as follows:

The thickness of foundation blocks for the house cellar has been reduced to 10 inches. Assuming that the soil is natural and dense, the footings have been entirely omitted, care being taken to see that all exterior walls are carried down well below frost line. A well-compacted surface of cinders or gravel, well oiled, has been substituted for the concrete cellar and garage floors.

A 6"x8" yellow pine or fir girder has been used in place of the steel beam. Framing of floors has been reduced to 2"x8" and the 2"x6" ceiling beams and roof rafters have been spaced farther apart. Bridging of studding and of ceiling beams has been omitted. In place of the hand hewn oak, square edged fir has been used for porch posts, framing and half timber work. Instead of oak siding, beveled cedar siding has been substituted. The rustic interior trim in the living room has been replaced with fir.

The quality of plumbing fixtures and fittings has been

**WORKING DRAWINGS AND COST ESTIMATES ON FOLLOWING PAGES**

lowered. The tile field and septic tank equipment has been replaced with a cess-pool equipped with two compartments for partial septic action. The exterior and interior painting specifications have been reduced by one coat and the pine floors are oiled only. Wall finishes and papering have been reduced in quality. The same follows through for the hardware, shower curtain, linoleum and other items of equipment where the costs show reductions.

The greatest change and the one showing the largest item of saving has been a change from lath and plaster to some form of good quality wall board for all walls and ceilings. Some very artistic and effective treatments can be secured by the use of this class of material in this particular type of home.

### Standard Specification, Estimate "A"

**EXCAVATION:** Earth 4' deep average for hillside locations.

**FOUNDATION:** 12" concrete blocks on 12" poured concrete footings for main house; 8" concrete blocks on 8" thick poured concrete footings for garage, porches and wing walls; cellar walls against earth banks waterproofed with one coat of mastic, trowelled on and inside with waterproofed cement plaster. Porch piers of field stone. All exposed concrete surfaces to have two coats of waterproofed cement plaster, rough cast finish, tinted light cream.

**FRAMING:** All No. 1 fir lumber; 4"x6" sills and corner posts anchored to foundation. Exterior and interior 2"x4" studs spaced 16" centers, doubled at all openings and diagonal bridged at least once in height. Structural steel girder; 3"x8" first and second floor joists, 16" centers, double bridged with 1 1/4"x3"; 2"x6" second floor ceiling beams, 16" centers and bridged; 2"x6" roof rafters 16" centers framed to 2" ridge and collar beamed. Porch posts and roof framing of rough, hand hewn oak, left exposed.

**EXTERIOR WALLS:** Frame sheathed with 7/8"x8" No. 2 N. C. pine ship-lap, laid on horizontally for stucco. Over heavy waterproofed paper, well lapped, 1" thick waterproofed cement stucco applied in three coats on wide mesh galvanized expanded mesh. Rough oak slab siding on gable ends.

**ROOFING:** 3/8" thick, uniform sized, black Penn slate with some grays and greens inter-mixed, laid random with copper nails over 30# felt on 7/8"x6" No. 2 N. C. pine matched boards; 16 oz. copper flashings at chimney, exposed window heads and half timbering; base and step flashings and pans under windows over porch roof. No leaders or gutters.

**FLOORING:** Living room 7/8" clear, oak strip flooring; bed rooms 7/8" No. 1 comb grained pine flooring. Rough underflooring throughout, 7/8" square edge No. 2 N. C. pine, laid diagonally. Rosin sized paper between flooring. Kitchen floor "A" grade linoleum on felt lining over 7/8" rift pine flooring. Living porch, 1 1/8" thick, single fir, matched flooring, set in white lead.

**INTERIOR FINISH:** Rustic, hand hewn oak trim, including fireplace shelf and open timbering work in living room. Whitewood trim in all other rooms.

**PLUMBING:** Overhead shower under porch. Lavatory in cellar. 36" single drain board white enameled sink in kitchen. White plumbing fixtures for bathroom. 60 gal. capacity storage tank and hot water heater to burn wood or coal.

**ELECTRIC WORK:** BX armored cable, oversized house service, no-fuse circuit breakers.

**EXTERIOR PAINTING:** Sash and frames painted with three coats lead and oil, dark brown. Oak siding, exposed oak timbering, shutters and oak sheathing stained two coats light brown oil stain.

**DECORATING:** Woodwork in living room, filled, stained light brown and waxed two coats. Three coats lead and oil paint and egg-shell enamel finish on all whitewood trim and fir doors. Rough cast, plaster finish in living room to be painted two coats and glazed. Bed rooms and halls wall papered over white coat plaster, ceilings kalsomined.

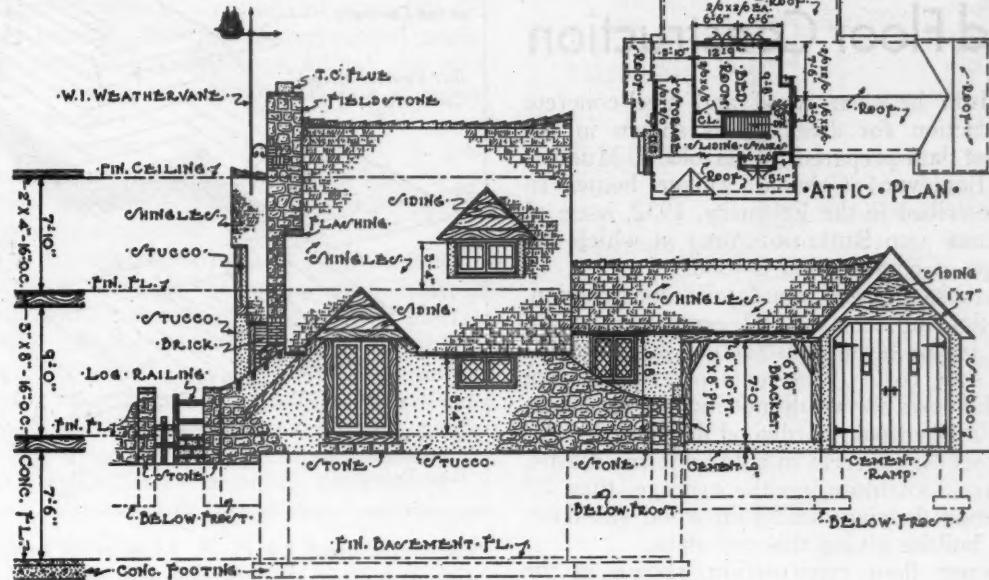
Kitchen and bathroom walls to be covered above base with pattern waterproof fabric, ceilings two coats lead and oil paint with one coat of enamel finish. Oak floors to receive filler, stain and two coats of wax. Pine floors filled, stained, shellacked and waxed.

**BATHROOM:** Black and white, basket weave, pattern mosaic, tile floor with black sanitary base 6" high. Front of bath tub tiled with 6"x6" white glazed tile.

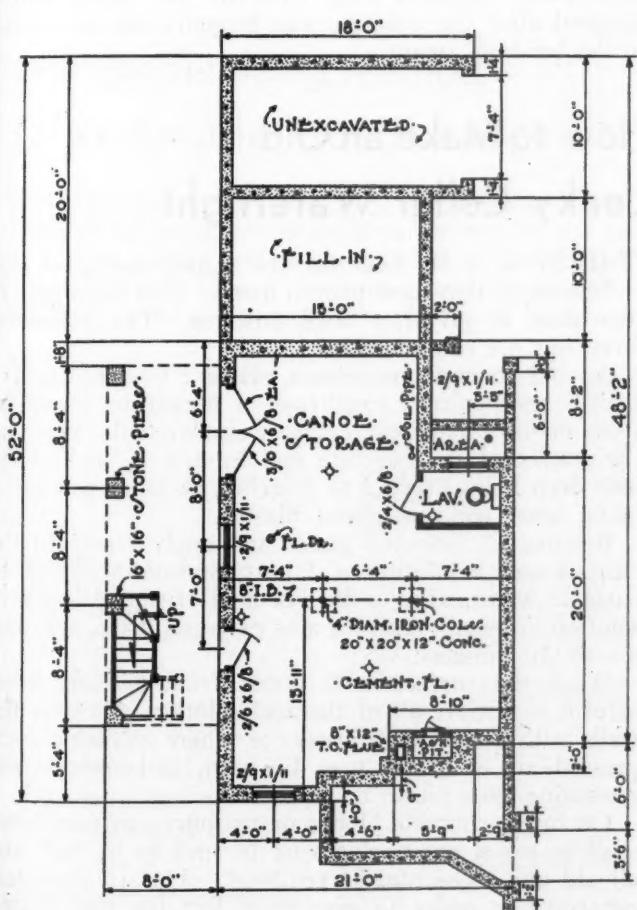
### COST ESTIMATES OF THE MAY "HOUSE OF THE MONTH"

By G. WILLIAM BAILEY

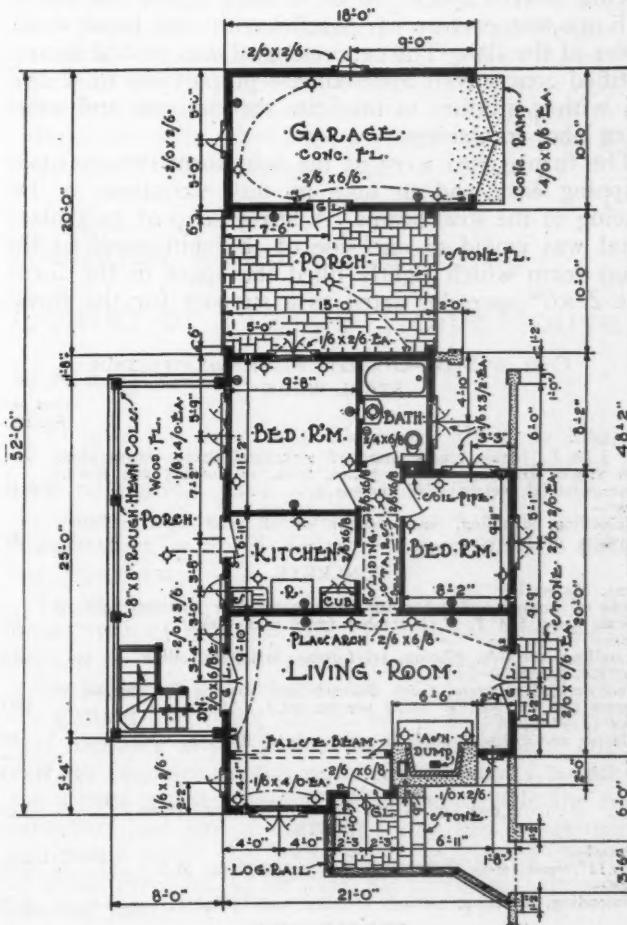
	Estimate "A"	Estimate "B"	Labor	Material
<b>1. EXCAVATIONS</b>				
100 CY. General Earth.....	55	35	.....	.....
41 CY. Pier and Trench.....	30	15	.....	.....
80 CY. Backfilling .....	40	24	.....	.....
<b>2. CEMENT WORK</b>				
367 CF. Footings .....	37	75	.....	.....
893 PCS. 12" Blocks .....	116	170	72	144
620 PCS. 8" Blocks .....	81	104	52	72
5 LF. Area Coping .....	2	2	2	2
10 LF. Steps .....	3	2	3	2
671 SF. Cellular Garage Floor.....	67	67	20	30
206 SF. Rough Porch Slabs .....	10	21	6	12
3/4 CY. Cinder Concrete Hearths and Deafening .....	3	2	3	2
<b>3. MASONRY WORK</b>				
237 CF. Rubble Stone Walls and Piers.....	95	47	60	40
206 SF. Flagstone Paving .....	41	41	10	10
Brick Chimney and Fireplaces.....	127	116	100	75
120 PCS. Brick Veneer .....	10	6	10	6
<b>4. CARPENTRY &amp; MILLWORK</b>				
400 LBS. Steel Beam and Lintel.....	5	12	2	3
7500 FBM. Framing & Grounds, Fir.....	225	225	120	120
1400 FBM. Framing—Oak, Rough Hewn.....	70	112	40	42
4200 FBM. Sheathing—N.C.P. or Fir.....	110	110	40	40
700 FBM. Sheathing—Oak .....	21	42	12	14
List of Exterior Trim.....	45	109	30	70
List of Sash, Door and Frames.....	123	283	80	235
List of Rough Hardware .....	45	.....	30	.....
3 1/4 SQS. Rough Oak Siding.....	16	20	12	15
List of Interior Trim and Doors.....	57	163	35	114
Stairwork .....	75	60	50	55
300 SF. 1 1/8" No. 1 Fir Porch Flooring.....	18	30	10	22
232 SF. 7/8" No. 1 Oak Flooring.....	21	21	16	18
368 SF. 7/8" No. 1 Comb Grain Pine Fig.....	33	33	17	29
60 SF. 7/8" Rift Pine Flooring.....	3	4	3	4
1 PC. Ornamental Iron Vane.....	10	60	10	30
<b>5. ELECTRIC WORK</b>				
58 Outlets—Wiring Only .....	65	65	25	35
34 PCS. Fixture and Hanging .....	26	119	12	30
<b>6. PLUMBING</b>				
Piping, Fixtures and Fittings.....	150	250	100	175
Water and Sewer Connections .....	55	45	55	45
Septic Tank and Tile Field .....	100	125	55	65
<b>7. HEATING</b>				
Boiler, Piping and Radiation.....	100	200	50	100
<b>8. SHEET METAL AND ROOFING</b>				
19 1/2 SQS. Slate Roofing.....	195	278	65	100
Flashing and Pans .....	30	61	15	30
<b>9. LATHING AND PLASTERING</b>				
60 SY. Stucco on Cement Blocks.....	42	30	25	25
144 SY. Stucco on Wire .....	144	72	129	65
282 SY. 3-Coat Plaster on Wood.....	183	127	60	120
92 SY. 3-Coat Plaster on Insulating Lath.....	55	55	20	40
250 LF. Cornerite .....	12	5	.....	.....
<b>10. TILEWORK</b>				
20	15	10	10	10
<b>11. PAINTING AND DECORATING</b>				
Totals .....	250	150	150	100
<b>12. EQUIPMENT</b>				
Door and Window Screens.....	30	86	15	65
1 PC. Medicine Cabinets .....	1	10	1	10
List of Finished Hardware .....	.....	60	.....	30
1 PC. Electric Range .....	.....	165	.....	150
1 PC. Refrigerator .....	.....	275	.....	255
1 PC. Shower Curtain .....	.....	15	.....	5
30 PCS. Window Shades .....	8	30	5	20
60 SF. Kitchen Linoleum .....	10	15	8	10
Totals .....	\$3025	\$4230	\$1689	\$2721
	3025	4230	1689	2721
<b>TOTAL—Labor and Material.....</b>				
	\$7955	\$4410		
<b>Approximate Cubic Footage: 21,300 cu. ft.</b>				
<b>Cost per Cubic Foot .....</b>				
	.34	.20 1/2		



•FRONT•ÉLEVATION•



•CELLAR•PLAN•



• FIRST • FLOOR • PLAN •

## **SCALE DRAWINGS OF SUMMER COTTAGE, MAY "HOUSE OF THE MONTH"**

**Front Elevation Shows Attractive Combination of Materials Used in the Construction of This Beautiful Summer Residence.** An extra bedroom in the attic is

reached by a sliding stair. On this floor, accommodations are provided for every necessity of holiday life. Basement serves as canoe storage and general utility room.

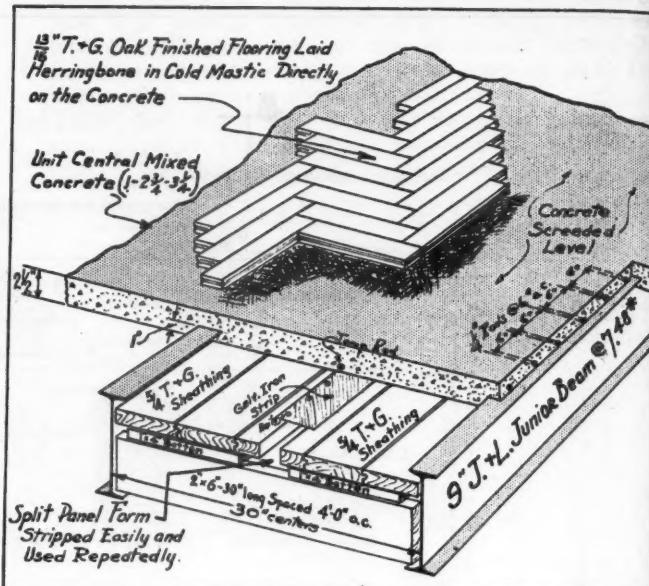
# Cost of Steel Concrete Vs. Wood Floor Construction

A cost comparison between wood and steel-concrete floor construction for dwellings is shown in the accompanying cost data prepared by Harold P. Mueller, builder of the Boulevard Colonial Village homes in Philadelphia, (described in the February, 1932, issue of AMERICAN BUILDER AND BUILDING AGE) in which the steel-concrete type of construction is used.

According to these figures, wood joist construction, with wood sub-flooring, costs 12.82 cents per square foot, while steel junior beam construction, with a reinforced concrete slab, costs 19.44 cents per square foot of floor area. The costs shown do not include the hardwood flooring. Finished oak, hardwood flooring, 13/16" T. & G., laid direct on concrete in cold adhesive mastic, cost 6¢ per square foot more, on the average, than 3" strip oak, hardwood flooring, nailed on wood sub-floor, according to the builder giving this cost data.

The steel-concrete floor construction, shown in the drawing, consists of junior steel beams supporting a reinforced concrete slab, 2½" thick. The junior steel beams are 9" deep spaced 30" on centers with the top flange encased one inch to eliminate bridging. Reinforcing steel is spaced on 6" centers across the beams, with one temperature bar parallel with steel beam at the center of the slab. The concrete used was central mixed, certified concrete of approximate proportions of 1-2½-3¼ with a mixture to lubricate the concrete and avoid extra labor in placing.

The forms used were of the split-form type to make stripping easy and to take up any variations in the spacing of the steel beams. A heavy strip of galvanized metal was nailed to one side of the split panel of the wood form which tightly filled the space in the form. The 2"x6" spreader acted as a support for the forms



Floor type used by H. P. Mueller in erecting 18 duplex brick homes in Philadelphia to sell at \$6490 per unit.

and rested on the bottom flange of the steel beam, eliminating the need for any vertical jacks or supports. The spreaders were placed approximately 4' centers, were easily stripped and removed, the forms easily dropped after the concrete was properly set, according to the builder's report.

## How to Make an Old Leaky Cellar Watertight

THERE is a big field for the waterproofing of old basements that have proved damp. This is an opportune time to go after such business. The following directions are recommended:

An old concrete or cement plaster: the old surface shall be mechanically roughened or hacked by means of stone mason's hammers, drills or similar tools, exposing the matrix of the concrete and leaving  $\frac{1}{4}$  inch to  $\frac{3}{8}$  inch deep holes every 2 to 3 inches, so as to provide a better bond for the cement plaster.

Remove all loosened pieces and apply freely to the cleaned area a solution of 1 part muriatic acid and 10 parts of water, using a fiber or acid brush. Allow acid solution to remain until the acid exhausts itself, approximately 10 minutes.

Wash the surface with water from a hose, being careful to remove all of the acid solution. Go over the walls with a stiff wire brush, or where available compressed air or steam may be used, and remove any remaining loose pieces or particles.

On brick, concrete blocks or masonry: mortar joints shall be raked out to depth of  $\frac{1}{2}$  inch to  $\frac{3}{4}$  inch and all old and loose mortar removed. This is absolutely necessary in order to give good key for the plaster. Prepare a grout of portland cement and water.

Mix to a creamy consistency and apply with a fiber brush to the cleaned surface, brushing the grout thoroughly into the concrete.

All masonry surfaces shall be thoroughly saturated with water before grouting is applied.

The cement plaster used should be composed of 1 part of waterproofed portland cement to  $2\frac{1}{2}$  parts of clean sand. If waterproofed cement is not available,

### COST OF STEEL-CONCRETE FLOOR CONSTRUCTION STEEL WORK

Cost per Sq. Ft.

Material—	
9" J. & L. junior beams, standard structural shapes as required for special framing, bearing plates, bolts, reinforcing and special fittings—total weight 2267 pounds.....	\$ 9.41
Labor—	
Unloading, handling, and erection of all steel work including leveling of joists.....	.60
<b>CONCRETE</b>	
Forms, Material—	
Cost of lumber and labor for making up four complete sets of forms using 5/4 T. & G. lumber (used nine times).....	.91
Labor—	
Handling, erection, placing, reinforcing, stripping, oiling.....	1.64
Concrete, Material—	
Ready-mixed concrete, truck delivery into position for chuting to forms (5.8 cu. yds. @ \$6.75 per cu. yd.).....	5.93
Labor (2½" Slab)	
Placing and finishing ready to receive finish flooring.....	.54
Total .....	\$19.44

### COST OF WOOD FLOOR CONSTRUCTION JOISTS

Material—	
3"x12" wood joists (1680 ft. B. M. at \$29.00 per M.).....	7.28
Labor—	
Unloading, handling, setting, leveling, and bridging.....	1.79
<b>SUB-FLOORING</b>	
Material—	
3½" T. & G. sub-flooring (900 ft. B. M. at \$23.00 per M.).....	3.21
Labor—	
Laying, fitting, and handling ready to receive finish flooring.....	.54
Total .....	\$12.82

Total actual cost of steel-concrete floor construction, one-half of duplex house, about 31'x20'.....	\$129.87
Total actual cost of wood floor construction, one-half of duplex house, about 31'x20'.....	84.92
Overall area of concrete-steel or wood floor.....	669 sq. ft.
Net area finish flooring.....	643 sq. ft.
Average rate of pay for labor in gang, both skilled and unskilled, 60¢ per hr. (8 men)	

use a high grade integral waterproofing, either powder or paste, to waterproof the portland cement employed, following manufacturer's specifications in the proportioning. A suggested ratio is 2 pounds of waterproofing to each sack of cement. Mix the waterproofed cement plaster to a stiff, workable consistency, adding the water slowly, using the minimum volume of water necessary to give a plastic mix.

After the plaster coat has been applied, a good quality portland cement paint may be applied to give an attractive, washable surface that is easy to keep clean and gives a better diffusion of light.

In case water interferes with the work: if there is a continual seepage through the walls, holes must be bored in the walls and tubes or small gas pipes inserted to concentrate the flow of water and relieve the pressure while the plaster coat is being applied. Caulk around pipes with oakum or lead wool. Drainage pipes should remain open until the waterproofed cement plaster coat has thoroughly set and is capable of resisting the pressure by its own adhesive strength, after which remove pipes and plug holes covering them with waterproofed cement plaster.

When basements are made thoroughly dry and sanitary a new field of opportunity is opened for their use. The livable floor area of the house is greatly increased and its sales value heightened. To secure extremely attractive basement interiors, panelling with wood, wall-board or some new finishing material may be done.

## New Modernizing Method Helps Seattle Home Builder

THE increasing importance of modernizing work is shown by the attention builders everywhere are paying to new selling and construction methods. A Seattle contractor, Victor J. Nelson, is actively promoting this work with a clever folder, illustrated below. In



addition to carrying definite suggestions for modernizing work this mailing piece provides a return post card that is very effective.

A method for brick veneering old houses is used by Mr. Nelson which he claims is very satisfactory and practical. The accompanying illustration shows how he builds up the veneer on a special reinforced concrete base and ties it to the old exterior. According to Mr. Nelson his method has been passed by the Seattle Building Department for heights under 20 feet.

## Methods Used in Lowering Center of a Large Stone House

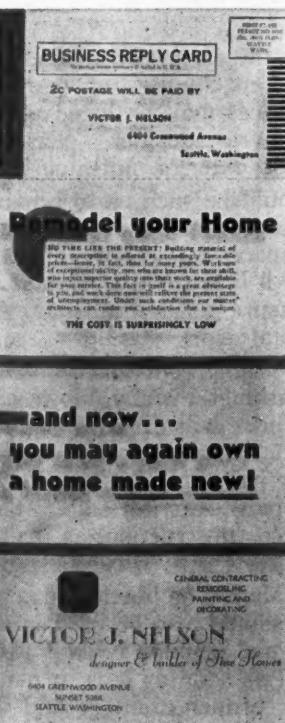
By A. E. COOPER

TO level the floor of a 2½ story all stone house in Philadelphia it was decided the center should be lowered by cutting down the central piers and dropping the floors. This decision was made after a careful examination by A. K. Cooper, contractor who handled the remodeling.

In making the examination he found that the stonework, instead of being laid in cement mortar was embedded in clay evidently taken from the excavation and a sprinkling of lime thrown in. The foundation below the ground line, being subject to the seepage of the natural moisture in the ground had remained soft and under the pressure of the walls had gradually sunk until the stones rested together. The piers inside the cellar, however, had had a chance to dry and so remaining stationary while the walls sank, making a difference of about three inches between the center and the outside bearing points.

Along the middle of the cellar were three center bearing points, separated about 15 feet. These were built-up piers of stone and clay-lime and washed with lime on the outside. Resting on top of these piers were the ends of the steel girders which carried the beams, the other ends were sunk in the outside stone walls. The highest point of the floors being over the two front piers, it was only necessary to lower them to level the floors.

This clever modernizing folder is sent out like an ordinary post card by Nelson. Business reply card is included.





Basement setup of equipment showing how structure was lowered without damage.

Rigging was therefore built-up under each half of the steel girders on the two front piers and a five ton screw jack placed on each pile under the girder. A block of wood was set on the head of each jack to prevent slipping.

After everything was in place the floors were slowly raised by giving each a full turn at a time until it was possible to move the steel resting plates under the girders. Then as two men operated the jacks at one pier, a third man hammered on the plate until it slid out. This had to be done while the girders were moving as the back spring or expansion of the piers as the weight lifted would almost immediately tighten again. When the weight was finally on the jacks, both piers were cut down about three inches.

Lowering the floors was a slow process as the jacks were only given a turn at a time. When the floors had dropped about one and one-half inches, it was found that the weight was entirely suspended by the beams and that only the girders were moving.

The jacks were then screwed down so that there was about a half inch space between the girders and the beams. When this was done one of the workmen went through the entire house and along each partition struck a few hard blows with a twenty pound sledge on an old plank. As this was being done the men in the cellar slowly lowered the jacks as the floors came down. The piers were then trimmed and a resting plate placed under the girders. The work was then allowed to set with the jacks in place until the following day, when a thorough examination was made before dismounting the rigging.

The job was completed at a cost to the customer of about \$75.00, which was made up of the following items: Three men working a day and a half setting up rigging, cutting down piers, forcing down floors, operating the jacks, repairing walls and dismantling and handling the rigging. Other charges were superintendence, two way transportation of rigging, risk, insurance and resetting a few doors. About 25 feet of rigging was used (which made four piles a little over

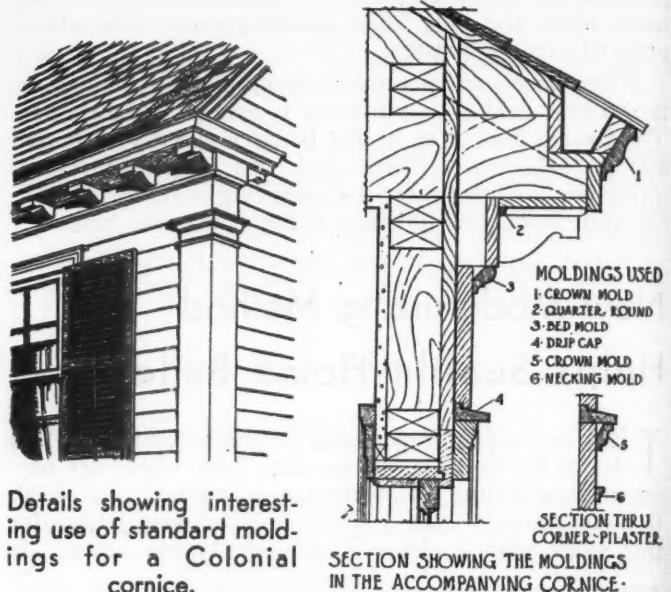
five feet high) together with four eighteen inch turn screw jacks and a few tools.

After the house had finally settled the plaster showed a few new cracks, but they were hardly noticeable among the many old ones caused by the house originally settling. As the house was being replastered, anyway, it was not necessary to consider this risk. The doors throughout the house were in better working order after the floors straightened.

## Stock Trim Simplifies Making of Attractive Cornice

THE Colonial cornice, when well done, is charming and durable. The accompanying design in easily worked pine is made simple by use of standard pieces.

Many forms of exterior trim are now fabricated at large millwork factories or made up at local planing



Details showing interesting use of standard moldings for a Colonial cornice.

mills. Some may be made by the carpenter on the job, but the bulk of them require machining for best results. Among the standard pieces may be listed porch columns, newels, balusters, louvres, dormers, pilasters, brackets, etc. A few rules for exterior finishing are:

All outside construction should be such as to provide rapid drainage of water and to prevent the accumulation of debris. No enclosed flat spaces on which water remains should be permitted. All horizontal work should be given a slope that will insure good drainage. All joints at the end of horizontal work should be constructed to prevent seepage of water underneath.

The liberal use of metal flashings over windows and doors in gutters, and on cornices will greatly lengthen the life of the building. On the outside edge at the ends of drip caps and window sills, an elevated edge of metal will prevent water dripping over the ends. This is especially beneficial on stucco construction, as it prevents streaking of the wall.

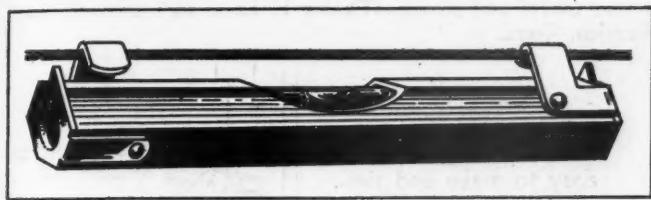
All end joints in the gutter should be liberally daubed with white lead. White lead should also be used in the joints in the porch floor. A good priming coat of paint should be placed on the wood as soon as it is in place. Provision should be made for proper drainage and the circulation of air around the foundation of porch columns and at the bottom of balusters. This permits water to dry rapidly and aids in preserving the wood.

# Improved Devices That Aid Construction

For Further Data About These Items  
Write American Builder Information  
Exchange, 105 West Adams, Chicago.

**TWO-IN-ONE LEVEL**—New equipment of all kinds is included in the spring batch of helps for builders. A new two-in-one line and surface level is one of the best. This is a light-weight product:  $\frac{1}{2}$  oz., and length is  $3\frac{1}{8}$ ". It is of sturdy construction, hard-drawn hexagonal aluminum tubing. A wide variety of jobs is possible. Contractors use it for all lay-out work, foundations, walls, sewers, sidewalks, grading lawns, etc.

The level is easily and quickly attached to a line, and special features of construction prevent accidental detachment from the line.



Quick-acting accurate line and surface level.

**NEW RAPID SANDER**—Many improved features are embodied in a new labor-saving sander just announced. Because of added speed, it is claimed that labor costs, which make up 80 per cent of floor surfacing expense, will be greatly reduced. Some of the important features include flexible automatic roller, link belt high speed chain; vacuum dust collector, special service motor, side-roller attachment.

Extremely important, especially on old work, is the fact that this machine surfaces right up to the quarter round. This flexible automatic roller allows the roller to conform automatically to floor irregularities. This produces a smooth surfacing job without lever manipulation by the operator. The machine is guaranteed for five years.

Increased speed makes this surfer a labor saver.

**GAS POWER MACHINE**—A new power tool operated by a gas engine for use where electricity is not available meets a growing need in this field. Power is delivered from the gas engine by means of a flexible shaft to the desired equipment which includes a power saw, portable grinder, drill, and general maintenance tool. Design of the equipment embodies engineering features which have been the result of much research and development.

Portability is an important feature of the gas power machine, and the equipment it operates. It is easy to put on the job and to use in a variety of locations.



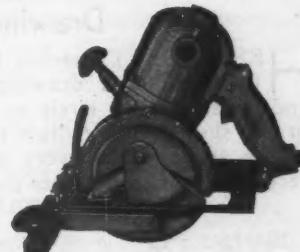
This gasoline engine operated hand saw is portable and efficient on the job.

The gas engine operates at 2600 r.p.m. and the speed is increased through the counter-shaft's belt drive to approximately 3500 r.p.m. on the shaft.

**NEW SAFETY SAW**—This is a powerful, light-weight saw (only 14 lbs.) having a six inch blade with cutting capacity in wood from 0" to  $1\frac{1}{8}$ ". Some of its uses are: cutting light lumber, ripping flooring, framing, etc. Used with an abrasive disc instead of the steel saw blade, it will cut or score tile, stone, slate, roofing materials, etc.

The outstanding safety features are a momentary contact switch and a swinging guard which covers the blade the instant the saw is disengaged from the work. A depth gauge permits quick and accurate adjustment for depth of cut; and a ripping gauge acts as a guide and gives the width of cut when ripping flooring, etc.

Although it weighs only 14 lbs., saw is fast and powerful and has wide range of uses.



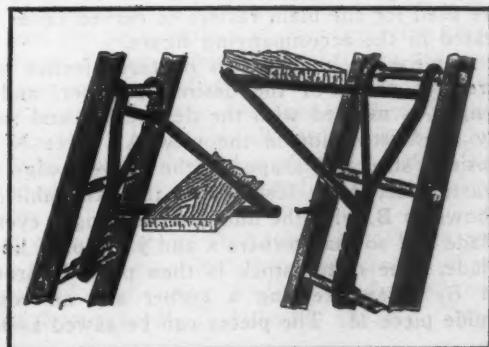
**STRONG LADDER JACK**—Three outstanding improvements feature the new ladder jack shown below. First is the 21" bearing bar which permits scaffold board to be placed at just the right working distance. There is room for two 10" planks, making a wide straight walk.

The second point is that five adjustments insure a level scaffold board regardless of ladder pitch, whether used on top or underneath the ladder. The third point is the extra hook which gives three-point support and insures rigidity and absolute safety.

These jacks save time and trouble, are light-weight, fold flat, and are built for long hard wear.



Improvements in jack make it easier to use, stronger and safer.



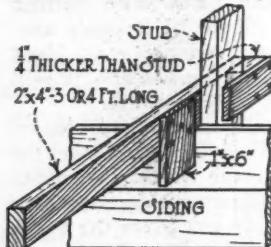
## PRACTICAL JOB POINTERS

A reader's exchange of tested ideas and methods, taken from their own building experience. Two dollars will be paid for each contribution published.

## Help for Applying Siding

**T**HE device described in the text and sketch following will be found a time and trouble saver in the event that it is necessary for a carpenter to apply novelty drop siding without assistance. It may be constructed quickly on the job and thrown away after the job is finished, obviating the necessity of transporting a bulky device to the next undertaking.

It is used by hooking it around the stud and over the siding board so that its weight forces the lap of the siding tight against the stud. The operations of marking and sawing may then be carried out by one man for he can mark the end against the corner board or opening trim, then saw it by sliding the board back a short distance, shove the joint tight, and repeat the operation at the opposite end.—  
ELDRED SMITH, Modena, N. Y.

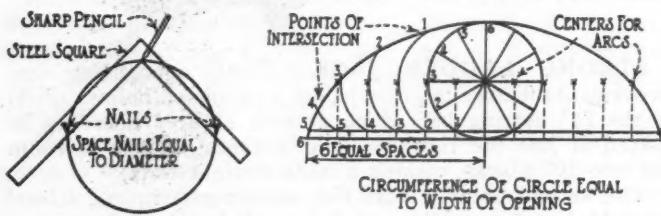


This simple device holds siding in place until it can be nailed, and makes a one-man job.

## Drawing an Arc

**H**ERE are two sketches that I find are quite handy. By the method of drawing a circle with the steel square and nails, use this circle as described, and on a center line in the sketch at left draw circles, and intersect the contact points as drawn. A very good arch can be formed for a recess bath or many other places where an arch may be used.

ALLEN C. HART, 3913 Electric Ave., Port Huron, Mich.



A good arch for recessed bath or other place may be secured by this method.

## **Fast Way to Cut Curved Pieces**

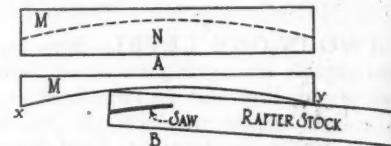
A VERY convenient and trouble saving method of sawing a large number of pieces, curved on one side, such as are used for the main rafters of curved rafter barns, is illustrated in the accompanying figure.

A piece of lumber two or three inches wider than the greatest width of the desired member, and of the same length, is marked with the desired arc and sawed as shown by the dotted line in the view A. Piece N represents the desired size and shape of the curved edge member. The waste piece M is fastened to the saw table as a guide, as shown at B, with the middle of its length even with the saw blade and so that corners x and y are on a line with the saw blade. The rafter stock is then pushed through, as shown at B, always keeping a corner and an edge against the guide piece M. The pieces can be sawed as fast as the saw

will take them and without the trouble of marking each one, and then trying to follow the mark.

If, in order to save material, it is desired to saw a curve on about one-third of each end of the rafter stock and to leave the middle flat, the piece M should have a shallow notch, large enough to receive the saw blade, cut at the center of its curved edge and the piece M moved towards the saw until the blade lies within the notch and out of the way. A sawed piece like N is then fitted with gauge blocks and used as a rider, the uncut rafter stock being laid on top of it and pushed through, with the curved edge of the rider in contact with the guide M.—MARION A. EMMONS, What Cheer, Ia.

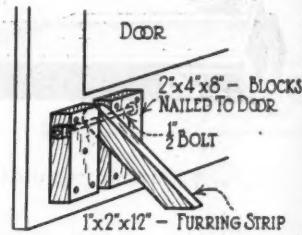
### Method proposed for rapid cutting of curved rafters.



## Sure Fire Door Dog

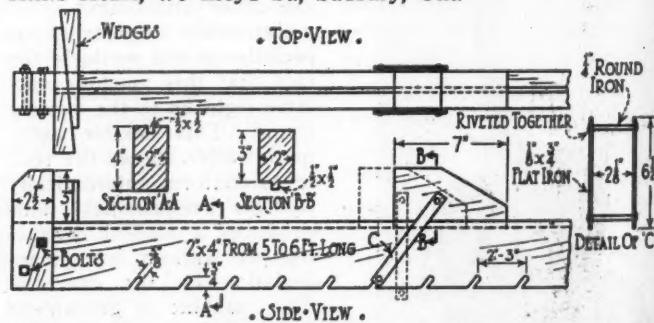
AM sending along another idea that I hope will help someone. I nail two 8-inch blocks on the bottom of the door on the inside of same about 2 inches from the edge. The furring strip is 12 inches long and the bolt is  $\frac{1}{2}$  inch thick (see sketch). This produces a sure fire door dog that is very useful and strong.—FRANK F. LISA, 1471 Dixwell Ave., Hamden, Conn.

A door dog that is easy to make and simple in operation.



## Handy Clamp for Shop

AM sending a drawing of a very handy clamp for a carpenter shop. The idea is not my own, but I have it from my native country in Scandinavia, where we never will find a workshop where they don't have at least half a dozen of these clamps. We usually make them from oak or beech. They are mostly used when gluing boards or doors together, and when made solid, they can stand a very high pressure.—HANS HOLM, 475 Lloyd St., Sudbury, Ont.



Hans Holm says this form of clamp is very popular in the workshops of Scandinavia and works well here too.

## **Brick Dust for Acid-Proofing Wood**

**W**HEN it is found necessary to protect small areas in a building from acid, I have found that brick dust, when finely powdered and used in connection with wood tar and resin, a distinct aid. Three parts of the tar by weight, six parts by weight of the resin and four parts by weight of the brick dust makes a very good mix for this purpose. The tar and resin are melted and well stirred together first, after which the brick dust is gradually stirred in. The part to be protected is then painted with the hot mixture.—  
J. E. HYLER, Peoria, Ill.

## Deriving Radius of an Arc

WAS much interested in the article "The Radius of an Arc" submitted and placed in the February issue by C. G. H. Engel, Box 96, Rossmoyne, Ohio, but it would seem of interest to readers to know just how this formula is derived. Hence this solution. Referring to the figure submitted herewith, let

$r$  be the radius,  
 $m$  be  $\frac{1}{2}$  width of arc  
 $h$  be the rise.

Then  $r-h$  is difference between the radius  $r$  and the rise  $h$ . Using the famous forty-seventh problem of Euclid, then:

$$r^2 = m^2 + (r^2 - h^2) = m^2 + r^2 - 2rh + h^2$$

The  $r^2$  cancels from both sides

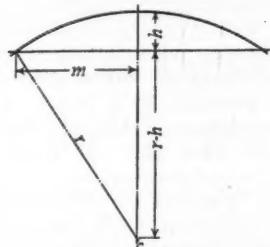
Combining:  $2rh = m^2 + h^2$

$$r = \frac{m^2 + h^2}{2h} \text{ or } \frac{m^2}{2h} + \frac{h^2}{2h}$$

Translated into plain language this means as follows:

Add the square of the rise to the square of the half arc length and divide the result by twice the rise.

This formula lends itself not only to deriving the radius when the rise and  $\frac{1}{2}$  arc length is given but if the radius is given with  $\frac{1}{2}$  arc length, then the height or rise can be determined and similarly if the rise and radius are given the  $\frac{1}{2}$  arch length can be determined.—T. Roy HAZELRIGG, Interstate Lumber Co., Missoula, Montana.

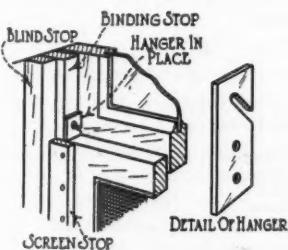


Sketch used to illustrate method of deriving radius of an arc.

## Better Way to Hang Window Screens

THE disadvantage of the usual method of holding screens is that the small strips of moulding tacked to the blind stop over which the grooved edges of the screen are slid, warp and often break off necessitating replacement.

Remove this moulding entirely and attach a strap iron hanger in which a diagonal slot is cut, as clearly shown in sketch. Two holes are drilled through the lower end of each hanger for screwing it in place. The accompanying sketch shows this plainly.—MIKE M. STAHL, Raley, Alta.



Hanging of window screens is simplified by use of hook in this fashion.

## Wood Screws into Plaster

PUTTING wood screws into plaster walls has always been a troublesome job. The methods devised for making a screw secure in plaster wall have always been complicated, difficult and slow. It has usually involved the insertion of a wooden plug in the wall first or the use of a very long screw and hoping to reach the wooden lath back of the plaster. Even so, a clean hole was almost impossible; the cracking and crumbling of the outer plaster was unavoidable.

Here is a method for putting a screw securely into a plaster wall without marring the smooth plaster surface, —a method that is simple, speedy and sure.

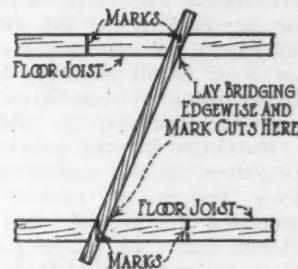
Insert an  $\frac{1}{8}$  inch twist drill into a hand drill; coat the twist drill with soft soap and holding the drill SQUARELY to the wall, SLOWLY make a hole in the plaster. Then likewise coat the screw with soft soap and put in SLOWLY. The simplicity, firmness and neatness of the result will surprise you! Of course, the hole drilled should always be smaller than the screw itself; when a very large screw is to be used, a small hole is drilled first and the hole is gradually enlarged by larger drills used in succession.

I found this idea particularly valuable in putting up porcelain fixtures on bathroom walls, also shelves, etc.—C. NYE, 975 Union Avenue, Bronx, New York.

## To Cut Floor Bridging

A GOOD way to find the right cut for floor bridging is to lay a piece of a floor joist timber from floor joist to floor joist and mark as shown. Now lay a piece of bridging across as shown and mark. You will then have the right cut for your bridging.—H. E. JENKINS, Sutherland, Neb.

H. E. Jenkins describes this method of figuring cut for floor bridging.

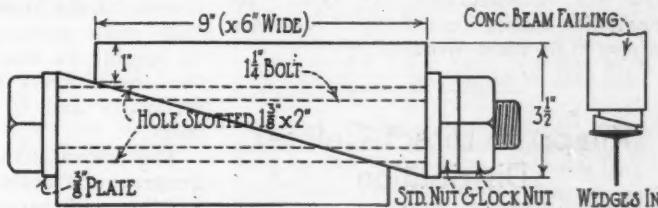


## Bolted Wedge Saves Money

RECENTLY an inspection of a reinforced concrete building, housing a high school auditorium, disclosed trouble in the wall columns. The framing consisted of long span concrete beams, spanning entirely across the building, a distance of approximately fifty feet.

A consulting engineer, retained to make an investigation, reported that the beams were throwing high bending stresses into the wall columns. Some cracks had already formed.

Owing to financial conditions the engineer was compelled to limit his expenditure to an absolute minimum consistent with safety. A comparative study resulted in a decision to



Sketch showing combination of bolt and wedge which proved very satisfactory on repair job.

place a line of steel girders down the center of the auditorium supporting the concrete beams at their centers only. Steel columns on independent footings were provided under every fourth concrete beam.

The girders were required to pick up the load at each concrete beam and the best method of accomplishing this presented a problem. It was desired to avoid lifting the concrete beam and it was important that a method be followed which would permit of equal bearing pressures at all supports after the steel girder was in place and all permanent loads acting. This implied an easily controlled method for picking up the load and one which could be depended upon to take up the load gradually.

Wedges at once suggested themselves but simple wedges did not solve the problem. Finally the combination of wedge and bolt was adopted, using wedges as detailed on the accompanying drawings.—H. D. HILBORN, Houston, Tex.

# NEWS—building activities of the month

## Committee Approves Home Loan Bank Bill

THE Home Loan Bank Bill passed an important milestone in its progress toward passage by Congress on April 19 when it was approved by the House Banking subcommittee.

Representative Reilly (dem. Wis.), chairman of the subcommittee, said there were no fundamental changes in the form of the bill as recommended by the president and introduced by Representative Luce (rep. Mass.). "It will be reported to the full committee immediately and will be pressed for action as soon as all members have had an opportunity to familiarize themselves with the hearings," he said.

Provision for the government's participation in the capital of the home loan system of twelve banks was amended to provide that the funds should come out of the Reconstruction Corporation. The bill provides that each bank should start with a minimum capital of \$5,000,000, to be raised by subscription from members. Then the corporation would subscribe enough of the remainder of the stock to bring the total capitalization of the system to \$150,000,000.

Senator James Watson of Indiana, in a radio address delivered at the Indianapolis Own Your Home Show, characterized the bill as "the most constructive plan which has ever come to my attention to assist the small home owner."

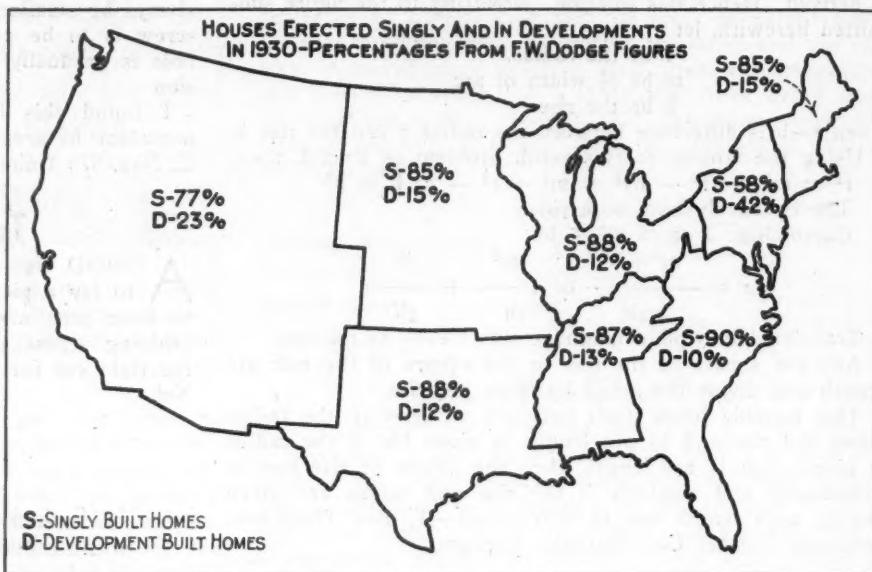
"Its possibilities as a permanent system are immeasurable," he said. "Its flexibility makes for a flow of financing where it is most needed."

## Knapp to Direct Celotex Distribution

C. E. STEDMAN, vice-president in charge of distribution of The Celotex Company, resigned his position on March 31. Harold Knapp, general sales manager since 1930, will assume direction of the company's distribution, working directly under B. G. Dahlberg, president.

## Dealer Opens Exhibit

A N architectural exhibition of residences has been opened at the J. A. Mahlstedt Company of New Rochelle, New York, dealer in building products, for the purpose of arousing interest in well-designed houses. Small scale block plans are shown with each home exhibited. The project is meeting with the enthusiastic cooperation of local architects and contractors.



## Houses Built Singly Total 82 Per Cent

**A**n analysis of the 1930 reported contracts has recently been made by the F. W. Dodge Corporation, classifying the single family houses built in that year into the two groups—1-family houses erected singly (mostly for owners' occupancy), and 1-family houses built by housing development companies. It was found that for the entire United States 82 per cent of the houses erected in 1930 classify in the first group while housing development companies were responsible for 18 per cent.

These figures mirror almost the exact reverse of the home building activity of 1928 when speculative building was at its height. In that year 31 per cent of the single family houses were built individually and 69 per cent by developers.

The above map diagram presents a geographical analysis of the 1930 home building with respect to the activities of the housing development companies. The Middle Atlantic States show the highest percentage of development home building—42 per cent. The suburban areas adjacent to New York City account for this. The Pacific Coast stands second in housing by developers, recording 23 per cent in 1930. The balance of the country ranges from 15 down to 10 per cent speculative, or from 85 to 90 per cent homes planned and built individually for owners' occupancy.

## Select Competition Judges

**A**PPOINTMENT of three architects to act as judges in its \$1,500.00 architectural contest is announced this month by Douglas Fir Plywood Manufacturers. Arthur L. Loveless and David J. Myers of Seattle

will collaborate with Charles H. Alden, professional adviser, in selecting the winning entries. Each of these judges is an A. I. A. member with years of professional experience. Entries in the \$5,000.00 cash-purchase plan for builders, carpenters, woodworkers, etc., are being judged by Douglas Fir Plywood Manufacturers' technical staff, headed by G. L. Bartells, director of research.

## Retail Store Rentals

**H**OW much can retail stores afford to pay for rent?" is a question builders often have to deal with. Following is a list of percentages compiled by Stanley Roe and issued by the National Association of Real Estate Boards.

Column at right shows per cent of volume of business rent should cost.

	Per Cent
Art Shops .....	10-12
Auto Accessories .....	8-10
Auto Agency .....	1½-2
Bakery .....	4-6
Barber Shop .....	10-15
Beauty Shop .....	10
Books—New .....	10
Books—Second Hand .....	15
Candy .....	8-10
Cigars and Tobacco .....	6-8
Department Stores .....	3-4
Drugs—Ordinary .....	8-10
Drugs—Cut Rate .....	5-8
Electrical Goods .....	10
Florists .....	10-15
Furs .....	10
Furniture .....	5-7
Garage—Storage .....	50
Gas Station .....	1c gallon
Groceries—Ordinary .....	7-8
Groceries—Chain .....	2½-4
Haberdashery .....	10
Hardware .....	6-8
Hosiery and Knit Goods .....	10
Jewelry .....	8-10
Meat Markets .....	4-6
Men's Clothing .....	6-8
Men's Hats .....	6-8
Millinery .....	10-12
Pianos and Musical Instruments .....	6-8
Radio .....	6
Restaurants—Regular .....	8-10
Restaurants—Cafeterias .....	5-6
Shoes .....	6-8
Sporting Goods .....	5-7
Trunks and Leather Goods .....	10-12
Women's Furnishings .....	6-8
Women's Cloaks and Suits .....	6-8
5 and 10—5-10-25—5 to \$1 .....	5-7

## CURRENT CONSTRUCTION FIGURES

### March Contract Awards Show Increase

**C**ONSTRUCTION undertakings during March showed an expansion of about 26 per cent over February, but this was only about 30 per cent of the total for March, 1931.

The first quarter of 1932 made an extremely low showing. A second quarter gain of from 5 to 15 per cent is predicted by F. W. Dodge statisticians and a 10 to 20 per cent increase in residential work.

**AMERICAN BUILDER AND BUILDING AGE** estimates for the month of March, based on F. W. Dodge reports modified to include all states as well as work of \$5,000 or less and modernizing, are as follows:

Residential buildings... \$67,393,948

Non-residential..... 54,089,640

Public wks. and utilities 32,838,850

Total ..... \$154,322,438

Building permits issued in 589 cities and towns during March, in contrast to

the above, showed a decline of 2.1 per cent for February. S. W. Straus & Co. tabulation of the 25 cities reporting largest volume of permits for March is as follows:

	Mar. 1932	Mar. 1931
1. New York, N. Y....	\$6,838,211	\$51,273,250
2. Los Angeles, Calif....	3,464,480	4,272,107
3. Portland, Ore....	2,319,615	677,750
4. Austin, Texas....	1,786,765	132,263
5. Washington, D. C....	1,258,330	2,654,390
6. Baltimore, Md....	1,250,160	2,366,760
7. Philadelphia, Pa....	1,103,080	955,485
8. San Francisco, Cal....	1,092,291	2,090,129
9. Boston, Mass....	797,551	1,171,133
10. Cincinnati, Ohio....	713,715	2,019,170
11. St. Louis, Mo....	519,247	1,122,821
12. San Antonio, Texas....	501,824	185,945
13. Cleveland, Ohio....	500,700	951,225
14. Atlanta, Ga....	462,740	403,064
15. Chicago, Ill....	439,400	18,054,100
16. Houston, Texas....	402,795	1,064,967
17. Fresno, Calif....	380,539	116,920
18. Indianapolis, Ind....	376,513	806,508
19. Detroit, Mich....	346,942	2,443,249
20. Newark, N. J....	338,775	608,169
21. Buffalo, N. Y....	333,692	1,543,792
22. Pittsburgh, Pa....	309,447	1,105,327
23. Minneapolis, Minn....	298,090	2,653,915
24. Rochester, N. Y....	293,325	570,629
25. Denver, Colo....	271,650	779,040
TOTALS.....	\$26,399,877	\$100,022,108

tion will comprise an investment of \$1,000,000, according to an announcement by Henry A. Lenhart, secretary of R. C. Associates, Inc., 11 West 42nd St., New York. It is probable that the houses to be erected will be of steel frame construction and of English and Colonial design. The unit system of steel framing to be used has been developed by Edmund T. See, New York architect.

Several apartment developments are being considered for the city of Yonkers, says a recent announcement.

### Eastern Survey Shows Little Overbuilding

A SURVEY by the Eastern Millwork Bureau, recently reported in the New York Times by Allen E. Beals, and including replies from a questionnaire sent to millwork manufacturers on the Eastern seaboard, shows many manufacturers reporting that the overbuilt conditions said to exist in New Jersey and New York have almost been absorbed. Eighty manufacturers out of 101 report that mortgage money is not sufficient for building requirements.

### Propose Large Scale City Housing Projects

**H**OW to provide much needed housing for city workers in the lower income groups at a time when construction costs are low and a building revival is most needed, was the subject of a recent conference in New York, sponsored by the Housing Association of the City of New York and the housing section of the Welfare Council of that meeting. Housing leaders from many sections of the country were present.

Financiers, as well as builders and architects, contributed to the discussions, led by Clarence Stein, New York architect, and William Sloane Coffin. Four main angles of the subject were brought out:

1. Large scale, low cost housing enterprises ought to be put on a business rather than a philanthropic basis.

2. In face of the failure of ordinary financing methods, what are the possibilities of: (a) Intra-industry financing; (b) Governmental aid.

3. The necessity of cutting structural costs through use of new methods and materials and the mechanization of all possible operations.

4. The importance of working out complete programs, providing for all contingencies in order to give an adequate basis for financial support.

### Complete Village of Small Homes

**A**LARGE housing project of small homes was begun at Yonkers, N. Y., with the filing of plans for a group of small dwellings. The total opera-

### New Catalogs Offered to Builders

11—"Wall Units of Atlantic Terra Cotta," an album of 18 pages showing recent installations by the Atlantic Terra Cotta Co., New York City.

12—"Homes of Permanency," a home design book of 64 pages presenting homes of hollow tile construction published by The Structural Clay Tile Assn., Chicago, Ill.

50—"Morgan millwork is classified in correct period designs and presented in three catalogs, "Correct Woodwork for English and Norman French Homes," "Correct Woodwork for the Spanish Home," and "Correct Woodwork for the Colonial Home," all issued by the Morgan Co., Oshkosh, Wis.

54—"Sofa Floors for Home Beauty" is a presentation in modern form by the Southern Oak Flooring Industries, Little Rock, Ark.

55—"Plank Floors as Crafted by Bruce" is 16 pages of beauty, offered by E. L. Bruce Co., Memphis, Tenn.

60—"Airtite Frames, Lock-Joint Sash" is a leaflet on window, frame and sash construction as offered by the Long-Bell Lumber Co., Kansas City, Mo.

62—"Early American Knotty Pine Paneling" is a sales building brochure on this subject by Dierks Lumber & Coal Co., Kansas City, Mo.

63—"They Last a Lifetime" illustrates in detail the use of Improved O. G. Fir Gutters, as offered by the Fir Gutter Co., Cadiz, O.

64—"Carved Wood Mouldings and Carved Wood Shelf Edgings" present effectively the products of the Klise Manufacturing Co., Inc., Grand Rapids, Mich.

66—"Pondosa Pine, the Pick o' the Pines"; a book of 80 pages presenting the properties and uses of Pondosa Pine offered by the Western Pine Assn., Portland, Ore.

67—"Colonial Entrances of Character and Distinction" is a 40-page design book offered by the Hartmann-Sanders Co., Chicago, Ill.

68—"Lamella Trussless Roofs" gives all details of this interesting form of construction as developed by the Lamella Roof Syndicate, Inc., New York City.

71—"Struco Slate and Its Application with Modern Architecture" illustrates the use of colored slate for fine interiors; presented by The Structural Slate Co., Pen Argyl, Pa.

72—"Beautiful Sani-Onyx, a Vitreous Marble" illustrates the use of this modern material for bathroom and kitchen walls and for table tops, window sills, etc., offered by the Marietta Mfg. Co., Indianapolis, Ind.

73—"The Transformation Book" illustrates Vitrolite for home interiors, issued by The Vitrolite Co., Chicago, Ill.

75—"Veos Tile—Vitreous Enamel on Steel" is a portfolio of plates on modernizing old bathroom walls, issued by the Veos Division of the Youngstown Pressed Steel Co., Warren, O.

76—"Modernize Your Home with Wright Rubber Tile," a booklet showing the possibilities of Wright rubber tiling for all floors; Wright Rubber Products Co., Racine, Wis.

77—"Sealex Wall-Covering," a portfolio presenting this new and versatile decorative material; Congoleum-Nairn, Inc., Kearny, N. J.

To get any of the above catalogs put down number or title and send this coupon to American Builder and Building Age, 105 West Adams Street, Chicago, Illinois.

.....

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## New Products Show Progress

**COMPOSITION PANELING**—Science is constantly working for the home builder, and in the past year has produced some remarkable new products. One of the most interesting is a complex resinous plastic that is basically somewhat like the material radio panels are made of. This is now being used in many ways in construction work.

A thin surface of this so-called "wonder wood," mounted on wallboard, is set in place like ordinary paneling. Since neither is affected by moisture, warping is unheard of. Because of insulating qualities, this paneling makes the rooms



Interesting panelling of fireproof material that is result of long research.

where used warmer in winter and cooler in summer—and deadens the passage of noise.

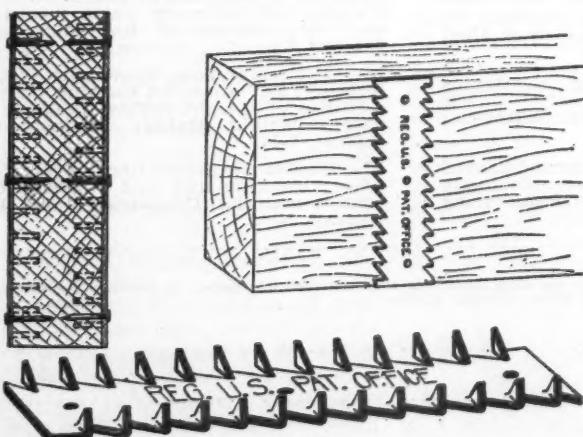
Tests over long periods of time have shown that the surface will not stain, crack, or peel. The panels can readily be cleaned by soap and water without the slightest harm. They are capable of withstanding without injury temperatures above the heat of boiling water.

The surface wearing qualities of this product which is used so much in the construction of radio sets and other electrical apparatus, led several years ago to the possibility of obtaining these same qualities in decorative effects for homes, offices, hotels, cathedrals, banks, and other buildings.

After careful research in the selection of panel core material and the development of the best type of waterproof glue, the finished wall panel was produced in beautiful color combinations which resists water and solvents—and those wriggling scratches that often mar fine woodwork.

It is now available in solid colors, tapestry effects, marble, moderne, and unique designs—as well as in rare wood grains.

It blends with any wood such as tables, chairs, book-racks, and cabinets which may be present.



Compression plates designed for application to floor joists to prevent shrinkage.



The exterior of this good looking house is of granite block veneer of natural granite four inches thick.

**GRANITE BLOCKS FOR VENEERING**—Mountain top quarries in North Carolina are yielding granite of beautiful sparkling pink and white, tan, brown, white and black mixed which possess the unusual characteristic for granite of cleavage in flat planes. This makes granite adaptable to use as a veneer material for home construction. This material is quarried to an average four-inch thickness, the length of the rectangular blocks being 14 to 19 inches and the rise 6 to 15 inches. This beautiful, durable stone is shipped ready to lay without much cutting or fitting on the job.

A ton of this granite will lay approximately 40 to 50 square feet of wall surface. This will enable the contractor to give the prospective home owner a bid comparing favorably with any other quality building material. A retail selling price has been established of \$16.00 per ton from car to job and \$18.00 per ton when hauled from yard to job. Building supply dealers secure this material in carload lots at a very low freight rate. Being impervious to weather, it can be stored in the building material yard or on the job without shelter, and can be dumped with a full guarantee of not breaking.

Materials from the same quarries are also available for flagstones, entrance hall flooring, porch pavement, rock gardens, etc. A much more extensive use of granite for home building is expected as the result of this development.

**FLOOR COATING RESISTS WEAR**—A floor coating recently announced, contains a special pigment which is three times harder than steel and insures resistance against normal abrasion and wear on concrete and wood floors. It is economical—as only one coat is required over previously painted surfaces or over a primer. Specifications of the manufacturer require that one coat of primer be applied to concrete floors which have not been previously painted. The paint is manufactured in light gray, dark gray, tile red, brown and black.

**PLATES PREVENT SHRINKAGE**—Would it be worth \$20.00 to the owner of a typical five-room bungalow to be guaranteed that his floor joists would never shrink to cause cracked plaster or sticking doors? The compression plate illustrated will accomplish this when applied to each side of each joist at the end bearing points and underneath bearing partitions. About 350 plates are required for the typical five-room cottage. Developed by a practical builder and tested by experienced engineers, these compression plates, properly used, will eliminate 90 per cent of the so-called settlement in buildings using wooden floor joists. They come in sizes to fit 8-inch, 10-inch and 12-inch joists and retail at a low price.

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20-E



At left is shown flower box which is one of many pieces available in knock down form



At right—new type closet which may be placed away from wall or in corner

## NEW PRODUCTS FOR BETTER BUILDINGS

**CABINETS AND LUMBER SPECIALTIES**—One field that is always good even in hard times is lumber specialty work. Very few homes, new or old, have a sufficient number of cabinets, shelves, flower boxes, lawn furniture, trellises, bookcases and other useful lumber products.

A new line of products of this kind is being offered by a manufacturer who supplies the lumber cut and finished ready for assembly. Pieces come boxed in cartons with full instructions.

Illustrated below is one of the cabinets made from this ready cut lumber. A wide variety of cabinet shapes, sizes and types is available. Shelving in many forms is also sold this way.

Standardized parts are used to get various combinations. A unique spring joint which mortises shelf parts to vertical pieces is an outstanding feature. Such cabinets and shelving are easily and quickly assembled. In addition they may be added to at various times without disturbing sections already in place.

Some of the uses recommended are for kitchens and pantries, stores, factories and warehouses, storerooms, attics.

In addition to the cabinets and shelving a large line of small lumber specialties, put up in cartons in knocked down form is available. For example there are flower boxes that are graceful and attractive like the one shown above. Another popular item is the bluebird or wren house. An ottoman, or small bench strongly made and good looking is another. This is used as a porch or lawn seat, serving stand or child's seat. Trellis pieces are very popular and any type of design may be secured at low cost. Other items include a child's sand box, wall shelf, and chain fence. Quite a number of pieces of lawn furniture including tables and chairs may also be secured in this easy-to-assemble form.

One of the many types of cabinets that can be made from ready cut pieces that are quick and easy to use.



**NEW TOILET FIXTURE**—Of considerable interest is this new closet which can be placed at any distance from the wall or across a corner. It is an entirely new type of closet: the tank rests on and is bolted to the bowl. The tank has a depression into which top of seat fits when it is up. Space is saved in the design making it take less room.

Other features include: complete draining, desirable in cold weather; quiet operation; no metal flush valve,—instead a rubber ball rests in seat ground in bottom of vitreous china tank. Tank, seat and bowl are three separate units.

**BUILT-IN BATH SCALES**—A new feature of interest for bathrooms is the built-in scales. Only two parts are visible: the dial, which looks like a clock set into the wall, and the platform, which is flush with the floor. No extra space is required and bathroom door may swing over platform. Scales are accurate, durable and easy to install.

**NIGHT LIGHT**—A new feature of interest for bedrooms is a compact night light which provides a low glow that does not disturb sleep. It consists of a small metal box which can be recessed in a wall only three inches deep. It uses a 15 or 25-watt standard lamp and directs the light out on to the floor in the room so that one may enter or leave without stumbling against furniture or without disturbing others. It is equipped with a simple shutter that controls the amount of light passing through the glass window, a feature that makes it especially desirable in nursery or bedroom.

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**A** NEW outdoor flush receptacle that provides a permanent, weatherproof convenience outlet—A clever new device for hoisting ash cans with minimum work for the home owner—**A** plywood cabinet that attaches to a door providing an extra roomy closet or cabinet in bathrooms—**A** new plastic insulating material made from certain minerals of the mica family which is lighter than cork, fireproof, and strong.

**A** new steel curbing for driveways, flower beds, etc., that is good looking, easy to install—**A** newly perfected utility sun-light for homes that provides healthful ultra-violet radiation and is five lights in one. A safe, flashless circuit breaker for homes that replaces fuses—**A** new and efficient back-up tile anchor and metal lath hanger that simplifies construction.

**A** new woven wire mesh that is strong and good looking and permits circulation of air without visibility—**A** perfected refrigerator with many new features including gallon water container, rectangular ice bars, cold control—**A** new pressure treated lumber that is rot and ant proof, clean, odorless and slow burning—**A** graphic scale of transparent, celluloid which enables plasters to determine wall and ceiling areas at a glance by placing on plans—**A** new roof and floor deck of flat and corrugated sheets of asbestos cement that is fireproof and reduces dead load.

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# LETTERS from Our Readers

## Homes to Live In

New Brunswick, N. J.

To the Editor:

The letter of Mr. George Donley, in your issue of April, regarding the current mass of conglomerate solutions for the production of homes in the mass, in the opinion of the writer, should touch a responsive chord in the thoughts of every intelligent member of the building fraternity. I approve his thought regarding the de-bunking of the bromide about building houses as we build autos.

Much has been made of the thought that a "house is a machine" to live in. Yes, but individuals have a wide range of definition with regard to the word "live," and rightly so. After all, the purpose with which we design, equip, and construct is going to be reflected in the product, in its detail and its entirety. Is the all consuming notion to build to sell, or to produce the best possible job for the expenditure of time, energy and money? What is needed is a pride in craftsmanship, in every field. The American public has emphasized the "to sell" idea overmuch, and has very nearly found itself "sold."

Standardization of fundamentals is a good and necessary thing. Reading matter and literature may be created from the same words. The difference lies in the combining. So, with standard units in any whole; and it does not appear that the theory of mass production as applied to the American home is going to be conducive to high standards of craftsmanship, which some people are still stubborn enough to believe might make the difference between just a house and a home.

ERIC FLEMING, Architect and Engineer.

## Re "Jerry Builders"

Denver, Colo.

To the Editor:

The term, "jerry builder" should either be discontinued or amplified. Every building magazine uses the term and I am tired of it. It is misleading to the public, many thinking it means the little fellow. As a matter of fact, some of the worst frauds are very large operators.

I insist that if a problem is stated and the causes shown, a solution is generally self-apparent. Now, if this matter of the fraud-builder is generally regarded as a menace, let us go after it in a constructive manner.

There is no reason why we shouldn't organize a public educational campaign, and in doing so create the desire for many of the good home features which people by the millions are now doing without.

WAYNE NOBLE.

## Not More Taxes, But Lower Costs

Chicago, Ill.

To the Editor:

People say that forms of wealth other than real estate should pay their share of the cost of maintaining the government. Correct, they should, I agree with them. However, bear this thought in mind that in the absence of a 50 per cent reduction in the cost of our local government, and, if we fail to reduce the federal budget by \$150,000,000 and agree to keep it down for the next five years, the money raised from other sources will be of no avail and will not have a tendency to reduce our tax bills.

The first step, the most important step, and the most necessary step to straighten out this tax muddle is to cut our government cost in two. This will be the foundation of our

You are invited to write your views on any subject of interest to the building industry. 300 words should be enough!

reconstruction program, and until such time as this reduction has taken place, conditions as a whole will continue to get worse from day to day.

This reduction must be made and is just as essential in the rebuilding of our financial structure as a solid concrete foundation is, in the construction of a large hotel. This reduction can be made and it finally will be made by the depression itself. But why wait for the economic force of the depression to bring it about, this may take 8 or 12 months. Why not do it right now and thereby help to defeat the depression.

To try and straighten out this tax muddle or to use that hypocritical expression "balance the budget" by creating new forms of taxation, would be economically unsound and would result in befuddling a problem that is already very complicated. This additional revenue would mean just that much more money for the politicians to waste, to squander, to plunder and to throw whoopee parties with.

JOHN J. MANGAN.

## Mr. Donley Indorsed

Mansfield, Ohio.

To the Editor:

Thanks for men like Mr. George Donley (page 88, April). Looking over some sections of our cities, you can get a good conception of what quantity or mass production would do to stimulate home ownership! Price was the only thing in mind, quality never thought of! Economy in home construction is far from being in price alone.

What is a better stimulant for building good character and citizenship than pride in home ownership? Let us build with pride, that the home can be owned with pride. The least we can do, is to build homes that will offer encouragement, comfort and happiness.

E. L. MYERS, Builder.

## Wants Small Houses

Portland, Ore.

To the Editor:

Being a jobbing contractor and builder, I am interested in three and four and five room small modern homes. Your published designs and plans are fine, but are all too large and costly. Portland is a large city but the greater call is for small homes among the working class. I hope to see some plans for small homes this season in your journal.

W. J. BROWN.

## Doubts Cost Figures

High Point, N. C.

To the Editor:

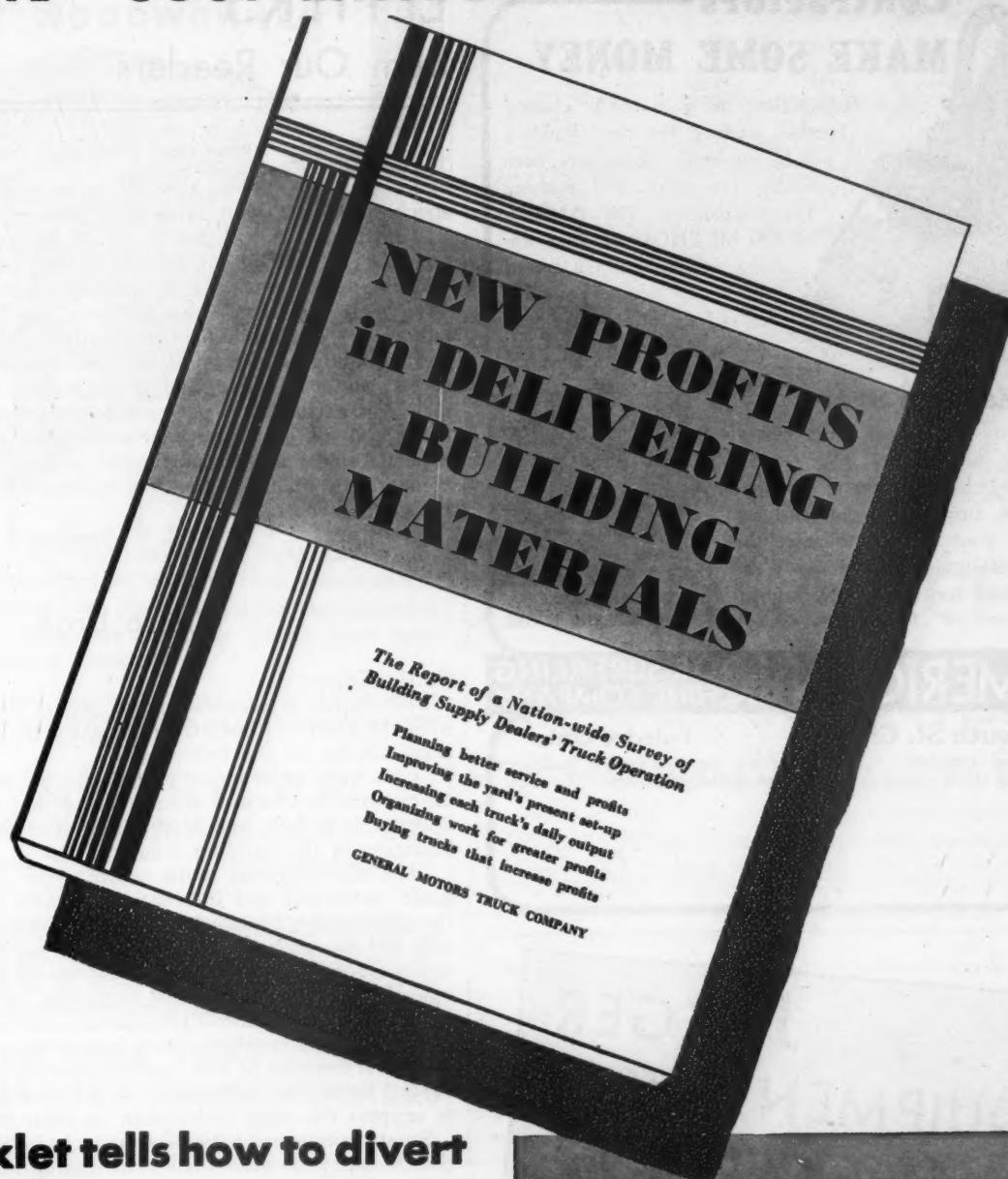
I am interested in your estimates of the "House of the Month," and wish to offer a few criticisms.

In the April "House" your estimate "A" is \$10,636. Estimate "B" is \$8,792, which is nearly \$2,000 less, which is out of line, and in our opinion cannot be backed up by any specification which could reduce the cost this much, in our forty years' experience; to cut the cost \$1,000 would be as much as would be possible unless you cut out many things which are essential and necessary.

I cannot reconcile your figures, and think that you have allowed yourself to believe that the impossible can be done.

Too many owners in these times of low prices looking at your estimates would be led to believe that they could obtain just as good a house under estimate "B" as they would

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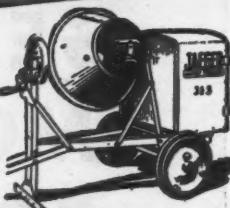
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## LETTERS from Our Readers

(Continued from page 64)

under estimate "A" at the "B" price, and without detailed specifications I cannot agree with your estimates.

I further consider that it would be better to eliminate estimate "C" altogether as you admit that this would not give the owner a satisfactory job, or a livable house.

To state that the same size house can be built for \$6,500 under poor construction methods, that would cost \$10,600 if built properly under first class conditions is all out of reason, for it cannot be done, and is misleading to the public; to making a saving of 10 per cent in the construction of a residence and still give the owner a fair job is as much as can be expected under any circumstances, and if you will limit your comparisons to 10 per cent you will have the appreciation of the general contractor.

R. K. STEWART & SON, Contractors.

#### We So Urge

Washington, D. C.

To the Editor:

The Bureau is receiving many letters from those charged with the award of construction contracts, containing expressions similar to the following:

"I am very much in sympathy with the work being carried on by your bureau and am convinced that it is essential and necessary; in fact, one of the biggest steps toward the stabilization of the building industry."

"The thoroughness with which your investigations are made, nationally and internationally, and the importance of the information obtained in respect to the performance record, stability and organization of contracting firms is of inestimable value to architects, engineers, public officials or individuals about to procure proposals or award contracts. I unreservedly commend the bureau facilities to all who may have reason to employ contracting firms."

The furtherance of this specific function of the Bureau will depend upon the willingness of the responsible contractors to support the work undertaken for their direct benefit.

Surety companies have been and are loyal to the construction industry through their contributing many thousands of dollars in the gathering, verifying, building up and maintaining performance records in order that they may be available not only to themselves in the writing of contract bonds, but available also to those "charged with the important responsibility of awarding contracts."

If you agree that the disclosure of information to those awarding contracts, namely; architects, engineers and public officials, is of primary and direct interest to the responsible contractors and that such disclosure should be supported by them, I will greatly appreciate it if you will urge in the next issue of your publication the importance of responsible contractors realizing their opportunity and obligation in supporting such a work.

You will note the care with which a plan was evolved so as to avoid in any manner an obligation on the part of the Bureau to the contractor, himself, by reason of his contribution towards the work of the Bureau. The Bureau's only obligation is, and must continue to be, one of unbiased investigation of the performance record, and disclosure of same as a fact-finding institution, without recommendation, favor or prejudice.

The opportunity for supporting the activities of the Bureau is only extended to those having filed performance records with the Bureau. More than five hundred contracting concerns have so far responded. This, however, is only a drop in the bucket, if the Bureau is going to properly serve those awarding contracts throughout the United States.

S. M. WILLIAMS, President.  
Bureau of Contract Information, Inc.



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## General Conditions of Contract Apply to Subcontracts, Legal Ruling Declares

By LESLIE CHILDS

THE question of whether or not the general conditions of a principal contract will bind and apply to subcontracts taken thereunder is one of great importance in the building field. The point has been the subject of considerable litigation, but since these cases have for the most part turned on their particular facts, it is difficult to cover the question by the statement of a hard and fast rule.

However, by the seeming weight of authority, where the general conditions of a principal contract are made a constituent part of the specifications, they will usually be held to apply to and cover subcontracts taken under the principal contract. Clearly, this is a point of building law that should never be overlooked when subcontracts are being entered into, and as an illustration of the possible danger to a subcontractor in a situation of this kind, the following case is of value.

#### Conditions Attached to Specifications

In this case, a school district let a contract for the erection of a school building, according to the plans and specifications prepared by a named firm of engineers. Attached to the specifications there appeared a set of general conditions, which were expressly made a part of the contract. Among these conditions the following appeared:

"All materials necessary to the construction of the building, delivered upon the premises, shall be held to be the property of the owner, and no such materials shall be removed from the premises without the written consent of the engineer."

The plaintiff took a subcontract to do a certain part of the work on the building for \$6,500, under this principal contract, and in making up his bid examined the specifications only, without reference to the general conditions.

After taking this subcontract, the plaintiff delivered a large quantity of stock materials upon the premises, to be used under his contract as the work progressed. Before the plaintiff had used more than a small part of this material, his principal contractor abandoned the contract, after having, however, been paid 90 per cent of the contract price for his work. In this situation, the plaintiff declined to go on with his contract, unless the school district would guarantee payment.

The school district declined to do this, and the plaintiff then sought to remove the materials that he had upon the premises awaiting use. The plaintiff's attention was then called to the general conditions in the contract and he was refused permission to remove the material on the ground that it had become the property of the school district. The plaintiff then filed suit.

This action squarely raised the question of whether or not the general conditions of the principal contract also covered the subcontract that the plaintiff had entered into. The plaintiff claimed they were not binding upon him for a number of reasons. The school district claimed they were, and the court in holding with the school district reasoned, in part, as follows:

(Continued on page 70)

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STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,  
of AMERICAN BUILDER AND BUILDING AGE, published monthly at Chicago, Ill., for April, 1932.  
State of Illinois }  
County of Cook } ss.

Before me, a notary public in and for the State and county aforesaid, personally appeared Bernard L. Johnson, who, having been duly sworn according to law, deposes and says that he is the editor of the AMERICAN BUILDER AND BUILDING AGE and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse side of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher—American Builder Publishing Corporation, 105 West Adams St., Chicago.

Editor—Bernard L. Johnson, 105 West Adams St., Chicago.

Managing Editor—Joseph B. Mason, 105 West Adams St., Chicago.

Business Manager—Robert H. Morris, 105 West Adams St., Chicago.

2. That the owner is: (If owned by a corporation, its name and address must be stated, and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

American Builder Publishing Corporation, 105 West Adams St., Chicago, Ill., and Simmons-Boardman Publishing Corporation, 30 Church St., New York, N. Y. Stockholders or one per cent or more of the total amount of stock are: I. B. Simmons, 1635 Diana Ave., Brooklyn, N. Y.; P. A. Lee, Hopatcong, N. J.; H. Anderson, 246 Ruby Rd., Brooklyn, N. Y.; E. G. Wright, 398 N. Walnut St., E. Orange, N. J.; S. O. Dunn, 105 West Adams St., Chicago, Ill.; C. E. Dunn, 3500 Sheridan Road, Chicago, Ill.; B. L. Johnson, 105 West Adams St., Chicago, Ill.; W. A. Radford, 105 So. Dearborn St., Chicago, Ill.; L. B. Sherman, 375 Sheridan Rd., Winnetka, Ill.; Isaac E. Howson, 105 West Adams St., Chicago, Ill.; Spencer, Trask & Company, 25 Broad St., New York, N. Y.; Partners of Spencer, Trask & Company; E. M. Bullock, Acosta Nichols, Cecil Barret, J. Graham Parsons, C. Everett Bacon, William R. Bassett, F. Malbone Blodget, Percival Gilbert, Harry S. Allen, Harry A. Minton, William Beckers, W. V. C. Ruxton, Arthur H. Gilbert, all of 25 Broad St., New York, N. Y.; William E. Stanway, 50 Congress St., Boston, Mass.; John Nightingale, 50 Congress St., Boston, Mass.; and S. Bayard Colgate, Special Partner, 52 Wall St., New York, N. Y.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is: (This information is required from daily publications only.)

Sworn to and subscribed before me this 31st day of March, 1932.  
(Seal) BERNARD L. JOHNSON.  
ANNE A. BOYD.  
(My commission expires Dec. 8, 1935.)

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## Legal Ruling on Contracts

(Continued from page 68)

"In taking the subcontract, plaintiff was bound to inform himself of the specifications involved in the contract rights and obligations of the party with whom he was dealing. This he did not do. He is not, however, relieved by his failure to seek the information. The general conditions are printed matter and precede the specifications, but expressly made to apply thereto. This method is adopted to save incorporation of the general conditions at length in the specifications, and is a recognized practice quite generally indulged."

"Subcontracts, unless forbidden, may be made, but when made are in subordination to the principal contract and call for performance according to its terms and conditions. The owner, unless retaining supervision of subcontracts, may rest upon the principal contract and not concern himself with a subcontract, except as to payments under the lien statute. \* \* \*

"The subcontractor, however, is concerned with the terms of the principal contract and the specifications, inclusive of general conditions, incorporated therein, for he undertakes to perform under and in accordance therewith, and, if the principal contractor provides, as the one involved here, that material taken to the premises is beyond recall, the remedy of the subcontractor is not in replevin.

"Plaintiff delegated his estimator to inspect the specifications and was furnished through him with the specifications without the general conditions. \* \* \* Does that fact save plaintiff from the aforesaid general conditions? Certainly not as to the school board, \* \* \*

"In the case at bar the contract \* \* \* expressly referred to the plans and specifications prepared by (engineers), and the general conditions were, by direct reference, constituted an essential part thereof, and ignorance of the general conditions by plaintiff, not induced by the school board, cannot be held to save him from the binding force of the general conditions, running with the specification." (213 N. W. 155)

### Conclusion

The holding in the foregoing case appears to be in accord with the weight of authority on this subject. The courts quite generally taking the position that, where general conditions are specifically made a part of a principal contract, they will also apply to any subcontracts taken thereunder, and be binding upon subcontractors as a matter of course, in the absence of exceptions.

In the light of this rule, the case reviewed constitutes a striking illustration of the importance to a subcontractor of having complete information, not only of the specifications but of the general conditions of a principal contract, before taking a subcontract thereunder. For otherwise, as we have seen, the default of a subcontractor's principal contractor may quite easily place an unexpected burden or liability upon the former.

On the other hand, where a subcontractor takes a contract with full knowledge of the general conditions of the principal contract, and that he is also bound thereby, he will at least be in a favorable position to guard his interests from the beginning. Clearly, the point brought out in the case reviewed is one that every contractor may well have in mind when entering into subcontracts, that are entered into subject to the terms and general conditions of a principal contract.

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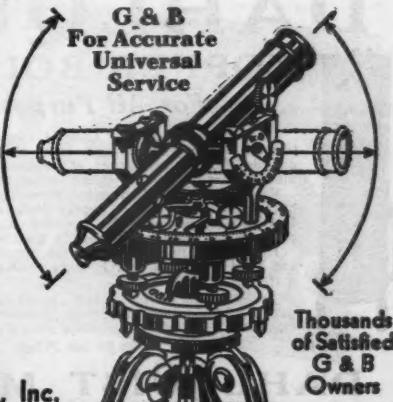
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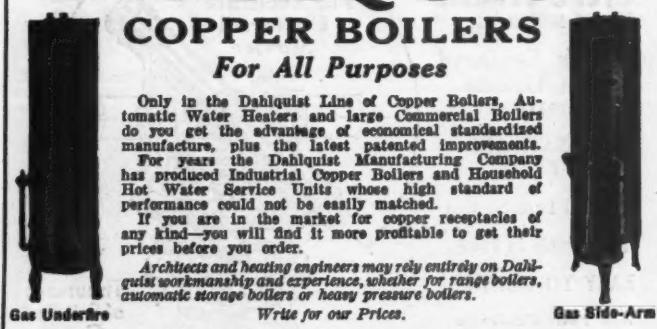
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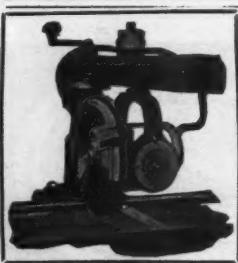
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Write for full particulars of the most modern development in power cutting methods.

## Builders Active in Spring Modernizing Drives

(Continued from page 27)

recruited from unemployed salesmen and directed by trained executives. These men help the home owners to get bids and put them in touch with proper contractors. Each representative has a complete list of all classes of contractors in his district. Names on these lists were furnished by managers of branch banks who certified to their responsibility.

At this writing, the check-up had been in progress only three weeks, but in that time it was found that out of \$87,126 of American Legion pledges first checked, \$78,419 work was actually under way or contracts let. The Buffalo Plan is a very thorough and practical one which merits study.

**STREATOR, ILL.**—It was thought that the chief obstacle to be overcome was high wages. Labor was asked to help plan the drive and the unions voluntarily lowered building wages from 20 to 25 per cent.

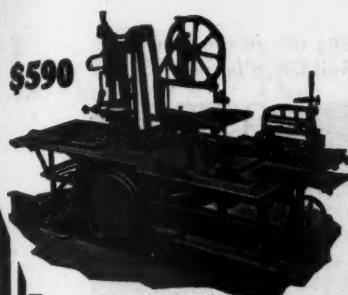
**ROCHESTER, N. Y.**—Workers in this city are busy following up pledges of the recent drive. A check-up of 35 per cent of the pledges that have been received showed that \$2,250,000 worth of expenditures had been made which amount was 35 per cent *more* than that pledged.

**YPSILANTI, MICH.**—A three months campaign is under the direction of the Home Service Committee of the Board of Commerce. This committee is composed of 50 contractors, dealers and other building men. A Better Homes Show is being run in conjunction, and emphasis is laid on gain to property owners who act now, rather than an unemployment relief appeal.

**GREENSBORO, N. C.**—A survey was made by the city fire department in co-operation with the city building inspector, who reported faulty roofs, chimneys, foundations, etc. Contractors and lumber dealers were furnished with daily lists of inquiries from home owners regarding improvements and with the reports of needed repairs turned in by the building department.

**PAWTUCKET, R. I.**—A construction campaign committee of the Chamber of Commerce conducted a very successful drive. Letters were mailed to all property owners with return post cards, on the back of which was a form for checking various types of repairs. These prospective jobs were assigned to contractors. The drive was originally planned to extend for three months. It was so successful, however, that it was extended to ten months. Every street in town shows evidences of the results in re-roofing, painting, remodeling work. Hundreds of jobs in interior work,—walls, floors, bathrooms, plumbing, wiring equipment, etc.—were performed.

Many other towns could be listed in which excellent results in dollar and cents terms have been achieved. It must be admitted that the enthusiasm of some campaigners in other towns has led them to over-state the practical results and in some cases drives have been known to consist mostly of spectacular newspaper publicity and much oratory. Discounting such cases, the fact still remains that there is a tremendous amount of good achieved by these modernizing drives as a whole, and every active man in the building industry should be doing his full share to take part in local efforts or in the organizing of new drives where none have been undertaken. Modernizing is the liveliest subject of the day.



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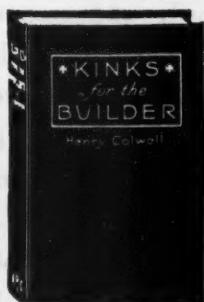
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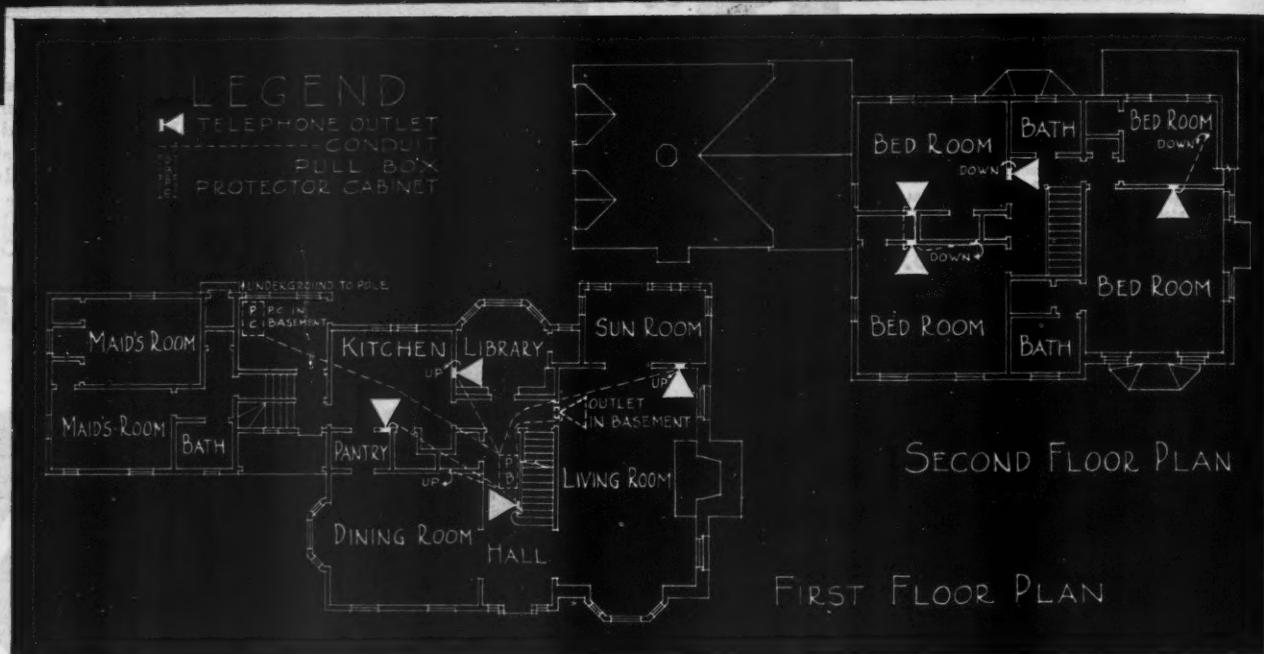
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This big, new book of 272 pages of pictures, descriptions, details and specifications of beautiful homes is just suited for enterprising builders, dealers and sub-contractors as a private catalog to arouse desire to build and to stimulate their business. With "Modern Homes" as a prospectus—with its many well-planned designs to show, "Sales Resistance" can be more easily overcome. Right now is the time to use every means to create home building and this book will be a big factor in helping builders to "cash in".

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The American Builder and Building Age, Date.....  
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